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United States Supreme Court.

No. 3 Original.

Office Supreme Court U. S.
FILED
MAY 1 1906
JAMES H. MCKENNEY,
Clerk.

THE STATE OF KANSAS, COMPLAINANT,

vs.

THE STATE OF COLORADO, ET AL., DEFENDANTS,
THE UNITED STATES OF AMERICA, INTERVENORS.

BRIEF FOR DEFENDANT, THE COLORADO FUEL AND IRON COMPANY, ON FINAL HEARING.

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United States Supreme Court.

No. 7, Original.

THE STATE OF KANSAS, COMPLAINANT,

vs.

THE STATE OF COLORADO, ET AL., DEFENDANTS,
THE UNITED STATES OF AMERICA, INTERVENORS.

BRIEF FOR DEFENDANT, THE COLORADO FUEL AND IRON COMPANY, ON FINAL HEARING.

STATEMENT OF THE CASE.

It will be sufficient for the purposes of this argument to state the issues in this case briefly:

I. The Original Bill.

On May 20, 1901, the State of Kansas filed its bill in this court against the State of Colorado, alleging that the Arkansas river has its rise in Colorado and flows through Kansas; that Kansas owns bottom lands along the river watered by an underflow from the river, and on some of these lands it has erected public institutions and uses some for agricultural pur-

poses; that many of its citizens have also acquired bottom lands watered by the underflow, and on which they raise valuable crops; that, as riparian owners, Kansas and its citizens so situated are entitled to the flow of the water of the Arkansas river in its accustomed place and in its natural volume; that the state of Colorado, claiming, under its Constitution and laws, the right to do so, has diverted the water of the river for purposes of its own, and has authorized the construction by private owners, of large reservoirs and canals for the purpose of storage and irrigation, thereby diverting the waters to arid, non-riparian lands to the extent that, during a part of the crop season, no water flows in the river from Colorado into Kansas, thereby diminishing the underflow of the river in Kansas to the injury of the bottom lands in the valley, and reducing the value of the same and the revenues of Kansas.

Decree was asked enjoining the state of Colorado from diverting the water, constructing or operating any more canals or reservoirs, or granting any charter, license or authority to any one else for the diversion of the waters of the Arkansas river and its tributaries within the state of Colorado for other than domestic use; also for general relief.

II. Demurrer to Bill.

On October 15, 1901, the State of Colorado demurred to the bill, because the facts stated did not constitute a controversy between the two states within the meaning of the Constitution of the United States so as to give the Supreme Court original jurisdiction;

that the bill was multifarious in joining claims of Kansas with claims of some of its citizens against Colorado and certain of its citizens; that the acts complained of were merely the exercise of a right to appropriate the water in conformity with the acts of congress and the Constitution and laws of the state of Colorado.

III. Opinion on Demurrer.

On April 7, 1902, the court rendered an opinion on the demurrer, deciding substantially, that the averments of the bill were sufficient to present the question as to the power of one state to wholly deprive another of the benefit of water from a river rising in the former and flowing through the latter and that, therefore, speaking broadly, the court had jurisdiction; that the court would not stop to consider the scope of relief which might be given on such a bill, but that the prayer for general relief would authorize any decree that the facts might be found to justify; that the court would not proceed on the mere technical admission made by the demurrer, or analyze the bill to determine whether or not it should be then amended, but that proof should be taken on the following matters:

1. Whether Colorado is, herself, actually threatening to wholly exhaust the flow of the Arkansas river in Kansas.

2. Whether the underflow is a subterranean stream flowing in a known and defined channel and not merely water percolating through the strata below.

3. Whether certain persons and corporations in Colorado must be made parties hereto.

4. What lands in Kansas are actually situated on the banks of the river.

5. What lands, either in Colorado or Kansas, are absolutely dependent on water therefrom.

6. The extent of the drainage area of the Arkansas river.

7. The possibilities of the maintenance of a sustained flow through the control of flood waters.

IV. Amended Bill.

On August 7, 1903, Kansas, by leave of the court, filed an amended bill to which, besides the state of Colorado, some fifteen canal and reservoir companies and this defendant, The Colorado Fuel and Iron Company, all Colorado corporations, were made defendants.

Besides repeating the principal averments of the original bill, it is further alleged that the original territory of Kansas included the country within the drainage area of the Arkansas river in Colorado, having been acquired by the United States from France in the cession of Louisiana under the treaty of April 30, 1803; that the river, from its mouth to the Colorado line, was meandered in the survey and considered as a navigable river, and the bed thereof in Kansas belongs to Kansas; that from Fort Gibson in the Indian territory, to the mouth of the river, it is navigable in fact; that the new defendants and others in Colorado, to the number of 1,000 or more, are diverting the water in Colorado for irrigation.

The prayer is substantially as in the original bill, and also that the court fix and define the respective rights of the parties to the waters of the river.

V. Answers.

During November, 1903, the various defendants filed separate answers. As to the main issues, the answers were substantially alike, admitting the course of the Arkansas river; that Colorado claims the right under its Constitution and laws to divert the water as alleged in the bill, but denying that it was or is in fact or law a navigable stream either in Colorado or Kansas; or that the diminution of the flow from Colorado into Kansas is mainly attributable to the diversion of water in Colorado, or that the underflow of the river spreads to the bottom lands of the valley and furnishes moisture for crops on the adjacent bottom lands, or that the value of lands in the river valley in Kansas is dependent upon the natural flow of water in the river; or that the acts of the defendants are wrongful, or, that by reason thereof, the value of the land in the river valley in Kansas has been diminished, or that when the territory of Kansas was created, the water in the river was wholly unappropriated, or that the common law of riparian rights extends over said valley, or that the owners of lands along the river are entitled to the unimpeded flow of the water, or that by the appropriation of water in Colorado, Kansas, or any of its citizens, have been injured or the fertility of their lands impaired.

It is also alleged that the ordinary rainfall in the river valley west of the 98th meridian is inad-

equate for successful agriculture and that in that portion of Kansas the inhabitants have been for many years appropriating the water from the river and using it for irrigation and other purposes the same as the people of Colorado; that the lands in the river valley belonging to Kansas or its citizens were acquired subject to the rights of upper proprietors of lands and industrial enterprises in Colorado to appropriate the water for irrigation, manufacturing and other beneficial purposes, and with full knowledge that the water of the river had been and would be, claimed and appropriated by the State of Colorado and its citizens for beneficial purposes; that beginning with the earliest settlement of the arid regons of the United States the doctrine obtained by necessity, common consent and uniform usage, that the water of all natural streams flowing through said regions was subject to appropriation and use for agriculture and other beneficial purposes; that such right to the water could be acquired both as against the United States as the owner of the land and all their grantees; that the doctrine had been approved and enforced by Kansas as well as by the United States; that many citizens and corporations in Kansas had been for many years engaged in constructing, maintaining and using reservoirs and ditches both in Colorado and Kansas for irrigation from the water of the river; that such persons and corporations were interested adversely to the claim of Kansas as asserted in the suit and would be injuriously affected by its success; that the appropriations of said citizens of western Kansas are to such an extent as to totally exhaust the ordinary flow of the river before it would reach the lands belonging to Kansas and the

citizens it claims especially to represent; that no decree which this court could render, would be of any avail to Kansas or such citizens unless, at the same time, the citizens of western Kansas appropriating such water, were also made parties defendant to this suit; that Kansas and the citizens it claims to represent had full knowledge of all such appropriations in Colorado and Kansas and never objected or sought to restrain them but, on the contrary, recognized and approved them, and are estopped thereby and guilty of laches; that the defendants have acquired by such use, acquiesence and approval, a prescriptive right to the use of such water, and that the action is barred by the statutes of limitation both of Colorado and Kansas.

VI. Answer of This Defendant.

The answer of The Colorado Fuel and Iron Company in addition to the common defenses before stated, presents the following special defenses, namely:

1. That it now is, and its predecessors in interest have been ever since 1877, engaged in mining coal and iron, and manufacturing coke, steel rails and other steel and iron products; that it has now in operation twenty-seven coal mines, four iron mines, six coal washeries, three thousand coke ovens and extensive steel works, the greater part of which are situated in the counties of Fremont, Pueblo, Huerfano and Las Animas, in Colorado, and upon the Arkansas river and its tributaries, the Purgatory and San Carlos rivers, and are wholly dependent for their operation upon water obtained from the drainage area of said river by means of reservoirs and ditches;

that during its last fiscal year its tonnage product was as follows:

Coal	5,271,942 tons
Coke	994,752 tons
Steel and iron	968,884 tons

having an aggregate value exceeding $17,000,000; that its disbursements to employes exceed $600,000 monthly, aggregating about $9,000,000 per annum; that prior to the year 1877 and since, it and its predecessors in interest, in order to provide water for their operations, acquired by purchase from the owners thereof, water rights in the river and its tributaries, most of them antedating the year 1860, until it now owns such rights to an aggregate amount of about 100 cubic feet per second of time; that during said time, they have been engaged in constructing reservoirs within such area for the purpose of collecting and storing the flood and surface waters of said area as well as the waters so purchased; such reservoirs being as follows:

No. 1, in Pueblo county, Colorado, capacity 500,000,000 gallons of water.

No. 2, in said county, capacity 500,000,000 gallons.

No. 3, in said county, capacity 2,700,000,000 gallons.

No. 4, in Lake county, Colorado, capacity 5,600,000,000 gallons.

No. 5, in Las Animas county, now partially completed, capacity 6,500,000,000 gallons.

That it has collected and proposes to continue to collect in these reservoirs for use in its steel works, mines, washeries, coke ovens, etc., the flood waters

of the Arkansas river and its tributaries; that the water so collected has been and is taken into and used in its various plants for purposes incidental thereto, without unnecessary use or waste; that more than fifty per cent. of the same is returned to the stream; that most of the water so collected and used is flood and surface water collected in the early spring at a time when it otherwise would, as it formerly did, flow down the Arkansas river in large volume and during short periods so that the principal portion of it would be of no value or benefit to anyone, but often a serious injury; that by reason of its collection and return of water and notwithstanding its partial consumption thereof, the flow of the water in the Arkansas river has been greater in the aggregate, more continuous and more equally distributed throughout each year than it would otherwise have been, and Kansas and those it claims to represent, were in no wise injured thereby, but were, and are, in fact, greatly benefited.

That its reservoir No. 4, otherwise known as the "Sugar Loaf Reservoir," was constructed by it under and by virtue of an act of congress, approved March 2, 1897, which abrogated the rights of the United States therein and authorized the secretary of the interior to sell the same at auction to secure the early construction and permanent maintenance of a reservoir to increase the flow of the Arkansas river and to supply water for mechanical, manufacturing and other purposes, subject to the control of the State of Colorado as provided by its laws. That the defendant purchased the same under said act and completed said reservoir in 1903, at an expense exceeding $120,000, and is now authorized and entitled to maintain

and operate the same under and by virtue of said act and purchase.

That its other reservoirs were constructed under, and in accordance with the laws of the United States and the State of Colorado, and its water rights aforesaid have been adjudicated and confirmed by decrees of court in conformity with the laws of Colorado.

2. That in connection with its purchase of water rights aforesaid, it purchased and owns the lands to which said water rights were and are appurtenant, to an amount exceeding 8,000 acres, all of which adjoin or abut upon the beds of the Arkansas, San Carlos or Purgatory rivers, and were then, and are now, entitled to all rights accruing to them as riparian lands, which rights are now owned and entitled to be enjoyed by this defendant.

That the water which defendant has, at any time, taken or used, or is proposing to take and use, from said streams is not equal to that acquired in connection with the purchase of said lands and which was appurtenant thereto, and in such use, defendant has, at no time, done more than to exercise its riparian rights as a user of such water, but it does not waive or abandon any right it has under the Constitution and laws of the United States and the State of Colorado on account of priority of appropriation for beneficial uses.

That in the purchase of said water rights and lands and the construction of its ditches and reservoirs, it has expended about $500,000 and has invested in all its lands and plants in the drainage area of the Arkansas river, about $25,000,000, all of which plants depend for their operation upon the water so collected and used, and if deprived of the same, or

any considerable portion thereof, the value of its investment and property would be thereby effectually destroyed and it would be irreparably injured, there being no other available water supply therefor.

That it has also constructed and has in course of construction, about 90 miles of ditch or canals within the area aforesaid, to be used in connection with its operations, but which will not decrease the usual and ordinary flow of said river into Kansas.

3. That in its operations, it employs about 18,000 persons, their families and dependents numbering about 80,000 persons additional, all of whom are now wholly dependent upon such operations for support; that in addition to the persons so directly employed or depending upon said employes, its operations furnish to auxiliary and dependent industries and to railroads, a large amount of business and thereby indirectly furnish to about 100,000 other persons a large proportion of their employment and support; that of such employes and persons, more than fifty per cent. reside within the drainage area of said Arkansas river.

That at some of its mines and plants situated in the drainage area of the Arkansas river, towns of greater or less size have grown up which are wholly dependent for their existence on its operations at such points, said towns having an aggregate population of about 22,000 persons; that the inhabitants of most of these towns are also wholly dependent for their water for domestic purposes, fire protection, etc., on that furnished to them by defendant from its general water supply.

That it is increasing the capacity of its steel works and other plants so that the number of its employes will increase about 1,000 and the number of persons dependent, in proportion.

That the resident population of the drainage area of the Arkansas river in Colorado exceeds 175,000; that the assessed value of property in said area is as follows:

Farms and grazing lands	$10,000,000
Live stock	8,000,000
Miscellaneous	18,000,000
Total	$36,000,000

the actual value being about twice that amount.

That all the residents of said area not directly dependent on the operations of the defendant, as aforesaid, are either farmers having large and extensive farms in high state of cultivation, stock growers, or engaged in other occupations, all of which depend directly or indirectly for their existence and prosperity upon the continuance of the right to appropriate and use the water of such area for agricultural, mining, manufacturing and domestic purposes.

That in the event this defendant and the residents of said area should be deprived of their right to so use such water, almost the entire area would become a desert, and have little value, as it was prior to its settlement, resulting in irreparable injury and damage to the people so concerned as well as to the State of Colorado.

4. That substantially all the fuel used in western Kansas by beet sugar factories, flour mills and other industries and for other purposes, is coal mined in Colorado, within the drainage area of the Arkansas river, a very large proportion of it being mined by this defendant from lands owned by it, and which

comprise the principal available supply of coal within that area.

That in the winter time, the demand and necessity for coal from Colorado, especially for domestic purposes, in the western part of Kansas, is very great and it is often difficult to supply it to a sufficient extent to prevent suffering.

That during 1903, this defendant's shipments of coal into Kansas for such consumption was as follows:

To points west of Hutchinson..	150,000 tons
To points east of Hutchinson..	75,000 tons
Total	225,000 tons

the same having an aggregate value, at points of delivery, of $1,350,000.

5. That this defendant also owns the principal available supply, and furnishes a large proportion of the coal and coke used by smelters and other large industries in Colorado, Nebraska, Idaho, Wyoming, Montana, Utah and New Mexico, and, to some extent, that so used in other states adjacent thereto; it also furnishes a large amount of steel and iron products and fuel to the various railroad systems within said states.

That these operations are dependent on a constant supply of water from the drainage area aforesaid; that the cutting off of said fuel and other supplies furnished by it, or any considerable portion thereof, would result in the shutting down of, or material injury to, many of such industries and to the great injury of the citizens of said states, including western Kansas.

That in its operations it is a user rather than a consumer of water, returning to the streams a large percentage of the water originally taken out of it, and it has thereby, at no time, nor in any manner, injured Kansas or any citizen thereof, nor will it do so in the future.

6. That the State of Kansas and the citizens whom it claims to represent had full knowledge of the operations of this defendant and its predecessors as the same occurred and of the effect, whatever it may have been, upon the flow of water in said river, and made no objection to any such operations, but acquiesced therein and appropriated and enjoyed the benefits accruing from the acts of the defendant and are estopped to complain of the same, and are guilty of laches, and have no right in equity or good conscience to claim any relief which would impair or destroy the rights aforesaid.

That the principal acts performed by defendant and its predecessors as to the appropriation and use of water from the drainage area aforesaid occurred prior to the year 1888 and the right of action therefor, if any there be, accrued more than fifteen years prior to the filing of the amended bill, and the suit is barred by the statutes of limitation of the States of Colorado and Kansas.

That by its long continued appropriation and use of said waters and the acquiescence therein of Kansas and its citizens, the defendant has a prescriptive right thereto, to the full extent of its appropriation and use.

It asked to be dismissed with costs.

VII. Motion to Dismiss.

On March 14, 1904, the defendants filed a motion to dismiss the amended bill on various grounds not necessary for us to mention.

The consideration of this motion was, by order of the court, postponed until the hearing of the cause on its merits.

VIII. Petition of Intervention.

On March 21, 1904, the United States, by leave of the court, filed a petition of intervention stating in substance as follows:

1. That the Arkansas river is not navigable in the States of Colorado or Kansas or the territory of Oklahoma, but is navigable in Arkansas and Indian territory.

2. That the lands lying within the water shed of said stream west of the 99th degree are situated in the arid region where the rainfall is not sufficient for agricultural purposes.

3. That in said area, there are about 1,000,000 acres of public land which is now uninhabitable on account of the lack of rainfall.

4. That only by means or irrigation and storing flood waters can any of said lands be rendered inhabitable and suitable for agriculture.

5. That on account thereof, the common-law doctrine of riparian rights has, by usage and custom in said region, and by the laws of some states and territories in which such land lies, been abrogated and in lieu thereof, the doctrine of irrigation and appro-

priation of water for other lawful and beneficial purposes has been established, and the latter right is superior to that of the owners of riparian lands.

6. That the United States by legislation, decisions and executive acts, have approved the abrogation of riparian rights and the establishment of the doctrine of appropriation for beneficial purposes as the only doctrine applicable to the public lands in the arid region, provided that such appropriation does not interfere with the navigability of the streams in which such waters flow.

7. That in reliance on the doctrine of appropriation, the inhabitants of the arid region in the United States have reclaimed some 10,000,000 acres of land which now provide homes and support for several millions of people; that within the drainage area of the Arkansas river in Colorado and Kansas, about 200,000 acres have been so reclaimed and made productive and now provide homes and support for many thousands of people.

8. That if the doctrine of riparian rights is applied in said region, the public lands therein would forever remain uninhabitable and unsalable and the land now irrigated therein would be returned to its original desert condition.

9. That the reclamation act of June 17, 1902, was in pursuance of the doctrine of appropriation for irrigation and other beneficial purposes.

10. That at least 60,000,000 acres of public land within the arid region, that are now uninhabitable, can be reclaimed under said act.

11. That when so reclaimed it will provide homes and support for many millions of people.

12. That within the drainage area of the Arkansas river and west of the 99th degree, about 100,000

acres of public land now uninhabitable can be reclaimed.

13. That such lands, when reclaimed, will support a large population.

14. That the United States have already expended about $1,000,000 in selecting sites for reservoirs contemplated by the act and have let contracts for their construction to cost over $2,000,000 and have under consideration further construction which will irrigate about 1,000,000 acres of public lands at a cost of over $20,000,000.

15. That there is now available, under the provisions of said act, over $16,000,000 for carrying out its purposes and that the said fund will increase at the rate of several million dollars per year.

16. That the contention of Kansas is contrary to the doctrine which the United States have sanctioned and approved and the maintenance of which is essential to the general wellfare of the citizens of the United States.

17. That the State of Colorado contends that all the waters within the watershed of said river belong to said state in its sovereign capacity and that it can authorize its inhabitants to divert and appropriate the same, leaving none to flow into the State of Kansas, notwithstanding the citizens of Kansas may have previously made appropriation of said water for irrigation and other purposes; that this contention on the part of Colorado would limit by state lines the doctrine of prior appropriation and would tend to destroy the navigable capacity of the Arkansas river and other interstate streams.

18. That neither the contention of Colorado nor Kansas is correct, no in accord with the doctrine

prevailing in the arid region, and if sustained, would defeat the purpose of the reclamation act.

19. That the reclamation act is the first positive declaration of the intention of the United States to undertake active operation in relation to their dominion and control over the unappropriated waters on the public domain and the development thereof, for purposes beneficial to the United States and the citizens thereof; that while no definite action has been determined upon with reference to its application to the Arkansas river, it may be desirable for the United States to commence operations upon said river at any time and it becomes important to determine the status of the United States in the extent and character of their interest and control over and disposition of, the unappropriated water of said river at the earliest opportunity.

The United States asked to be allowed to take proofs, and to be heard in argument and have such relief as they may be entitled to.

IX. Replication.

On March 7, 1904, Kansas filed formal replication to the defendants' answers.

Kansas also filed an answer to the petition of intervention, in general denial.

The defendants filed no answers to such petition, it having been intimated by the court that it was not necessary to do so.

X. Appointment of Commissioner, Etc.

May 16, 1904, Granville A. Richardson was appointed commisioner to take evidence in the case and report the same without finding of facts or conclusions of law.

Subsequently orders were made allowing the parties to abstract and print the evidence when the taking of the same should be completed.

On October 16, 1905, the evidence having been completed, it was ordered that the complainant file its briefs within three months and defendants their briefs within three months thereafter, and the United States their briefs three months thereafter, and the cause was set for argument before the court on Tuesday, October 9, 1906.

ARGUMENT.

It is understood that the main issues, common to all the defendants, will be argued chiefly in the brief filed by counsel for the State of Colorado.

The first portion of this brief will therefore be devoted to defenses peculiar to The Colorado Fuel and Iron Company.

First. The Gravamen of the Complaint.

The position of Kansas and its sole ground of complaint is that the defendant corporations are organized for the purpose of, and are, diverting the waters of the river for "*agricultural purposes.*"

The status of this defendant in that respect as stated in the answer is as a miner of coal and iron

and a maker of coke and of steel and iron products, and not engaged in agriculture in any way. The evidence introduced on its behalf establishes that fact, and this evidence is not controverted or assailed, as indeed it could not be. (729.)*

In so far then as this defendant is concerned, the bill is misconceived and has no foundation on which to stand.

Second. Riparian Rights.

Kansas asserts that the strictest doctrine of riparian rights prevails. If so, the answer of this defendant and the evidence on its behalf shows that it is excercising only rights of a riparian owner in the reasonable and necessary use of the water for manufacturing and for domestic use by its employes, returning that unconsumed (the principal portion) to the stream.

It acquired originally some 8,500 acres of riparian lands on and along the banks of the Arkansas river and its various tributaries. In connection with the purchase of these lands and the riparian rights, if any, appurtenant thereto, it also purchased under the laws relating to beneficial uses, the water rights appurtenant to these lands; its various industrial plants are located upon some of these lands, while others, not suitable or unnecessary for its uses, have been allowed to lie idle, while the water appurtenant to all of them has been taken into its plants and used, in so far as required for manufacturing, mechanical and

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*Figures in parentheses refer to pages of the printed record, unless otherwise indicated. References to pages of complainant's brief refer to its opening brief on final hearing, unless otherwise indicated.

domestic purposes; the balance, about seventy-five per cent., being returned to the stream. (731.)

So this defendant can, if need be, stand on the same platform as Kansas, and by the same sign win.

Third. An Additional Right.

But this defendant does not need to depend wholly on either the riparian or the appropriation right. It has still another right, if not superior to either, equally as good.

In the act making appropriations for sundry civil expenses, approved October 2, 1888 (25 Stat. 526), the director of the United States geological survey was authorized to select reservoir sites, and such selections when made operated to withdraw the same from entry and settlement. Under that act a reservoir site called the "Sugar Loaf Reservoir" site, near Leadville, Colorado, was selected and withdrawn. (13 Land Dec., 93.)

For some years nothing was done in the way of constructing a reservoir on the site, and finally for some reason it was concluded to abandon the scheme so far as the government was concerned, and in 1897, the following act was passed:

"AN ACT TO VACATE SUGAR LOAF RESERVOIR SITE IN COLORADO, AND TO RESTORE THE LANDS CONTAINED IN THE SAME TO ENTRY.

"*Be It Enacted by the Senate and House of Representatives of the United States of America, in Congress Assembled:*

"That the public land embraced in the reservoir site known as Sugar Loaf reservoir site, numbered five, located in Lake county, Colorado, which was withdrawn from entry and settlement under the pro-

visions of the act making appropriations for sundry civil expenses of the government, approved October 2d, 1888, is hereby restored to the public domain, and the secretary of the interior is hereby authorized to dispose of the same at public auction after thirty days' notice by advertisement, at a price not less than two dollars and fifty cents per acre, under such regulations as he may prescribe so as to secure the early building and permanent maintenance of a reservoir for the storage of water to increase the flow of the Arkansas river as contemplated by the government in reserving the reservoir sites of the arid region, but nothing herein shall prevent the purchasers or their assigns from using said water for mechanical, manufacturing or other purposes which does not materially lessen said contemplated increased flow. Provided, That nothing in this act shall be construed to deprive the state of Colorado of the control of the water in any reservoir which may be constructed on this site by any person or corporation or association, under the regulations provided by the state laws in such cases.

"Approved, March 2, 1897." (29 Stat., 603.)

The evidence on behalf of this defendant shows that it purchased the site under the act and completed the reservoir in conformity with it, and under and pursuant to the laws of Colorado relating to the appropriation of water for beneficial uses; that this, its principal reservoir, has a capacity of 5,600,000,000 gallons and is situated on the Lake Fork of the Arkansas river near Leadville. (731.)

It will be noticed that the act does two important things.

1. It authorizes the "building and permanent maintenance of a reservoir for the storage of water to increase the flow of the Arkansas river," and the use

of the water for "manufacturing, mechanical and other purposes."

By this, in so far as it has power, congress has sanctioned the impounding of water in this reservoir for the purposes named.

2. That the control of the water therein shall be as provided in the laws and regulations of the State of Colorado in relation to water.

Whatever, then, may be the contention of Kansas or the government in this suit, as to any other water, they can not be heard to claim any control whatever over this water, or its use by this defendant, until at least a case is made and proof given that it is not being disposed of and used as the act contemplates.

Nor has this court any power to decree in relation to it, except upon averment and proof that the act has been violated. Nothing of this kind appears or is claimed.

This view is supported by Wisconsin vs. Duluth, 96 U. S., 379 (387) (and cases cited), in which the state of Wisconsin complained that the city of Duluth was destroying a navigable river by cutting a canal. It appeared that this was being done under the authority of congress, as a harbor improvement, and this court refused to interfere because congress had acted on the subject and provided for the work to be done, saying:

"When congress has, by any expression of its will, occupied the field, that action is conclusive of any right to the contrary, asserted under state authority."

Fourth. Equitable Considerations.

The evidence on behalf of this defendant shows that the water which it uses in its business (other

than that in the Sugar Loaf Reservoir) was acquired by the purchase of about 8,500 acres of irrigable riparian land with accompanying water rights along the Arkansas and its tributaries, the San Carlos and Purgatory rivers, at a cost of about $335,000, and that this water, instead of being used to irrigate this land, is turned into the reservoirs of the company for use in manufacturing and domestic purposes by its employes; that it uses in its operations (mostly in its steel works) about 9,000,000 gallons of water in each twenty-four hours, for steam, cooling and condensing purposes only, and when that not consumed becomes so heated as to be useless for cooling purposes, it is returned to the stream, less than twenty-five per cent. being actually consumed. (732.)

If this water had continued to be used for irrigation, less than thirty-three per cent. would have been returned to the stream. Besides this, the use for irrigation would have been heaviest during the crop season, at the time when Kansas complains that the water in the Arkansas river is lowest, nor would it have been stored in reservoirs from the high waters of the streams in spring.

Under the operations of the defendant, the high waters of the streams, instead of being allowed to run down as formerly to make floods below, are stored in the reservoirs and, after use, the return to the river of the seventy-five per cent. is equal and continuous daily in the summer crop season as well as at other times, and the normal flow of the stream is thereby equalized and increased.

No other conclusion can be arrived at than that the normal flow of the river must, by this conservation and restricted use of the water, be increased, com-

pared with what it would be if it were used for irrigation. Indeed, it is apparent that it is even better for this normal flow and all dependent on it, than if the water were not used by this defendant at all, for in that case the great surplus of spring flood would rush by them, while the summer flow would be more diminished than now. That defendant's operations equalize and preserve the normal flow has not been questioned by complainant. These steel works and coke ovens all being situated along these streams, are strictly within the riparian doctrine in relation to the use of water.

The completed reservoirs are shown to have a total capacity of 15,800,000 000 gallons. The original companies, of which this defendant is, by consolidation and purchase, successor, were organized as early as 1883 and have been using this water to a greater or less extent ever since.

It disburses in the pay of its employes alone, about $9,000,000 per annum and in other operating expenses, about $6,000,000, making a total disbursement of about $15,000,000 per annum for its operating expenses, exclusive of purchase of raw materials, and has a total investment in the drainage of the Arkansas river of about $30,000,000, producing annually about 550,000 tons of iron product, 3,500,000 tons of coal and 75,000 tons of coke. Upon these operations directly depend about 100,000 persons.

It also appears that while the water rights which it owns amount to about 58,000,000 gallons per twenty-four hours, it is using at present but about 9,000,000 gallons, and of that consuming but about 2,000,000. (730.)

That its products go into the states of Idaho, Wyoming, Montana, Utah, New Mexico and Old Mex-

ico, and supply the railroad systems, smelters and other industries of those countries. (733.)

That in the drainage of the Arkansas river alone, about 175,000 people are directly or indirectly dependent upon its operations.

That incidentally and of special concern to Kansas, it is shown that during the year 1903, it shipped into Kansas 225,000 tons of coal, worth, at points of delivery, exclusive of freight charges, over $350,000. (732.)

That western Kansas depends largely upon Colorado for fuel for its industries and domestic use and that this defendant furnishes about five-sixths of such fuel.

It also appears that if its use of the water was cut off or materially curtailed, it would close down all these operations and that, coupled with the cutting off of the supply of water for irrigation and other purposes to the balance of the people, would cause the country to revert to its original desert condition. (733.)

As against this Kansas' counsel urge the claims of a few first bottom settlers whose crops suffer in dry seasons only.

No legal or equitable cause of complaint having been shown against this defendnat, it is entitled to a decree dismissing the bill as without equity as to it, and this decree we ask for, unless the bill shall be so dismissed as to all the defendants.

While the defense of The Colorado Fuel and Iron Company seems perfect without reference to defenses common to the people of Colorado and the arid regions, all of whom are interested, and in which this company is also interested, for if there is to be neither

irrigation, production, nor people in the arid region, there will be no demand for steel and iron products, or fuel, we desire to submit some considerations which present themselves in respect to these common defenses.

Fifth. Kansas Does Not Represent a Majority of Her Own Citizens, But a Small Faction Only.

To show that we do not misstate the facts when we say that this suit represents the interests of but a small faction of the people of Kansas, we quote the following from the testimony of the witnesses for Kansas.

MR. MURDOCK, their chief witness on everything, the editor of the Wichita Eagle, the inventor of the underflow and the promoter of this suit, testifies as follows:

"This suit was authorized by the legislature, I think, by reason of the action of the people in Cowley, Sumner, Sedgwick and Reno counties, acting in concert. We had to convince our legislature that we were being damaged by the loss of water. I do not expect that the counties of Hamilton, Kearney, Finney, Gray, Ford or Edwards take an interest in having this action instituted. I don't know. They wanted to profit by Colorado's example, I reckon. They were, in fact, taking out the water from the river themselves to some extent. My first complaint was against the western people of Kansas, and not against Colorado. * * * We are perfectly willing that the people of western Kansas and Colorado shall have the use of the river the same as we have, or for the same purposes. *This excludes their use of the river for irrigation.*" (264.)

Mr. Murdock also says that when he first went to Kansas, he dug in the valley for water for himself and teams and ascertained that there was an underflow and that the agriculture of the valley was largely influenced by it; that some time in the eighties he took up with the secretary of war the question of the ditches being built in Colorado and Kansas, and tried to have the secretary stop it, but was informed that in the absence of some enabling act, the secretary could do nothing. Mr. Murdock then said:

"Then I commenced the racket in the newspaper that brought about this contention here to-day." (252-3.)

The following witnesses for complainant reside in western Kansas and testified as follows:

PIERCE. "I expect there is more cattle kept in western Kansas to-day, west of Dodge City, than there was in 1878. They farm the upland now in my neighborhood and raise the best oats, wheat and barley raised in the country without irrigation. They use irrigation some in the valleys. (545.)

"I know in a general way from talk and reading that they were irrigating in Colorado for the last 10 or 12 years, and I have never made any complaint or lodged any objection against Colorado doing this, and have no personal kick at this time. I am probably raising as good crops as I was several years ago, and the land is worth every bit as much to the acre as it ever was—a little more. The lands of my neighbors have not depreciated. In boom times the land went away up extravagantly, but outside of boom times, I do not think they would take any less now for land than it has been. (546.)

"In this part of Kansas, along the Arkansas river, the right to irrigate with water from the river is of

vital importance * * *. If it be true that the issue of this case is that Kansas wants to establish the principle that no water should be taken out of the river for irrigation purposes, but that the water shall be allowed to run down the river to its mouth, *I am not interested in that sort of a proposition.*" (547.)

STILLWAGON. "If it was not for the water I would get out just as quick as I could, because you can not raise crops without the water. In other words, a farmer can't live by farming in this community unless he has water to irrigate his land. I am the owner of lands abutting on the river and I am interested to get the water, if I can get it, for the purposes of irrigation. I am not interested in keeping the people of Colorado from getting the water. *I believe there is water enough for all if it is used right.* The way I understand this suit, it is to *divide up the waters between Colorado and Kansas for the purpose of irrigation.*" (551-552.)

"For the last two years the Great Eastern ditch was out of repair, but now it is in first-class order. I think there was a change in the company about a year ago." (552.)

WORDEN. "I have known ever since I have been in the country of irrigation in Colorado, and of the construction of ditches in that state, but I have never made any complaint or lodged any objection to the construction or operation of these Colorado ditches, except privately. I knew and realized from my own knowledge of the country in western Kansas, the necessity of irrigation to make successful crops, and I know that it is true of eastern Colorado and western Kansas * * *.

"The ditches that I have spoken about in our country are kept up very well, but not as well as they

ought to have been. We started in to clean out the Occidental ditch, but did not complete it altogether. There was a canal in that vicinity, called the Alameda canal. It has washed out * * *.

"If the ditches were attended to, and we had more water for our ditches, I think our crops would be allright.

"I don't know that I am taking the position that the Colorado ditches should be shut off for the mere purpose of allowing the water to go down the river. I don't think that Kansas is any better than Colorado, or Colorado any better than Kansas. I think it would be radically wrong, myself, to prevent everyone taking water for irrigating purposes, compelling everyone to leave the water in the river, simply to run by to its mouth, *and that would be a detriment and injury to western Kansas as well as Colorado.*

"I think it is true that for the successful farming of this western part of Kansas, including the lands in our county, we must rely upon irrigation *and are vitally interested in the maintaining of the right to irrigate.*

"I have heard no talk or discussion among the citizens of our county which would indicate that they wish to do away with the doctrine of irrigation and have the water simply run by in the river." (565.)

PYLE. "I don't know that the owners of land here would prefer to have the water go down the river * * * rather than to take it out for the irrigation of crops, but I have heard this theory advanced. They prefer to have the water to irrigate their lands. I don't know of anyone insisting that water should not be taken out in Colorado for irrigation purposes simply to pass the water by without being used for the irrigation of lands along the river in Kansas." (569.)

"In the last two years the ditches have been cleaned out and more water used. Before that time

the ownership was non-resident, but the home people have gotten hold of the ditches in the last few years, and that is the cause of the revival." (571.)

"It would have an injurious effect upon the lands already irrigated if the water were shut off from the Arkansas river and not allowed to run in the ditches, but I couldn't say to what extent, because they are in pretty bad condition now. We could not depend upon the land now under irrigation to raise crops if the water was shut off from the Arkansas river. (573-574.)

DIESEN. "What I would like to have is more water for irrigation. This would be to the benefit of this section of the state, in my judgment, and it is what all the people here want. I *hope to get more water for irrigation as the result of this suit.*" (577.)

"The problem in this locality has been to get the water with which to irrigate these lands, and I understand it has been recognized in what I have designated as the arid part of Kansas, that we had a right to take out the waters of the river as far as we could get waters and use them in the irrigation of these lands.

"I do not recall any instance of anybody disputing our right to take out water for irrigating purposes. The nature of this suit has been discussed more or less in this community. I expect that the bill filed by the State of Kansas against the State of Colorado purports to be on behalf of the owners of land adjoining the Arkansas river in this part of Kansas, as well as in all other parts of Kansas * * *. I don't understand that this bill was brought *as a negative upon the right to take the water out for irrigation* as against the right to have it continue unimpeded and unobstructed throughout the State of Kansas." (579-580.)

"We have had irrigation conventions here in Garden City from time to time. They have been attended by irrigators from Colorado, and our people have gone to meetings in Colorado to discuss irrigating, and also to the irrigation congresses that have been held from time to time throughout the United States, so that, as a matter of fact, there is no doubt that Kansas, west of Kinsley, has been more in sympathy, or more aligned with interests in Colorado in respect to its development than it has with that part of Kansas east of Kinsley, because they have practically the same conditions." (581.)

"If the people along this river should now be deprived of the right to take water to irrigate this 75,000 to 100,000 acres of land, it would probably lessen the population and the country would naturally go back * * *. Considerable flood waters pass down the river that are not used for any purpose whatever, and if they were impounded in reservoirs in the State of Kansas, undoubtedly the waters that now go to waste could be used for the purpose of irrigating a large body of land which is now arid and unproductive." (582.)

LONGSTRETH. "I should judge there is somewhere in the neighborhood of 100,000 acres under ditch in my county * * *. There is a great deal of water which runs to waste in the flood waters of the Arkansas river * * *. There are along the drainage area of the river in western Kansas many thousands of acres of unirrigated lands at this time which are suitable for irrigation. There are opportunities for the storage of this water by the construction of storage reservoirs within Kansas, almost natural reservoir sites * * *. We have one good reservoir site right on the ditch, right on the bottom, that if once full of water, would irrigate the whole valley there in dry seasons—25,000 acres—and that

would care for that 25,000 acres throughout the dry season * * *.

"I have been interested in the subject of irrigation for some years, and have made such efforts as I could to try and develop the state. I have pioneered in that line in Kansas. I have also taken some interest and kept track of the development of Colorado along that line. I have lodged no complaint and started no suit and filed no protests against Colorado developing her irrigation projects. This matter of irrigating the land has been discussed among the people of my county * * *. The irrigated land itself has brought the settlement in along the river * * *. I heard of this suit when it was first talked of in the beginning. My understanding was that the State of Kansas claimed to be representing our citizens along the Arkansas river. I don't know what they would be representing if they did not represent them. If the amended bill of complaint in this case seeks to establish a doctrine which would prevent all Coloradoans and also all citizens of Kansas from diverting water from the Arkansas river, *that would not be to the advantage of myself and the citizens of my county.*" (588-589.)

CRAIG. "I am a stockholder in the Kansas ditch. There was considerable irrigation done from the ditch up to 1887, in the end of the boom days. There was considerably more done early in the boom than afterwards, and up to the present time, in fact. There is not as much irrigating done from it now as there was in 1885 to 1888 * * *. The ditch has simply been filled up and it has been in the hands of a receiver and the mortgage companies have had charge of it and it has simply gone down. That is the case with all of the ditches in here. During the last 10 years, prior to 1904, there has been sufficient water to supply these ditches, if they had been in condition to take it along in May until the middle of August. There is nearly

every summer, I think. There has been plenty of water for two or three months." (597-598.)

"The work on the Great Eastern ditch started in 1881. This ditch has been extended, but they never complete these ditches * * *. They let the farmers run the ditch and a few of them along close to Lakin let their headgates sink into the river * * *." (599.)

"I discovered very shortly after I came here that to make farming a success in this locality it would require the application of water to the land by irrigation, and when we discovered that, we set about trying to get the water on the land, and in doing that I aided in the construction of at least two ditches, and we have been irrigating more or less upon our land from the time of the completion of the first ditch to the present time, and we are still irrigating some. I think it is not possible in this part of Kansas, which lies between the Colorado state line and Dodge City, to rely upon crops, year after year, without irrigation * * *. There is now probably 100,000 acres of land in Finney county that is so situated as to be capable of irrigation from the systems which have been constructed, if they were in repair and we had water to fill them." (600.)

"I have heard individual views upon the question of this suit and its probable effect discussed among the people of this county. If it be true that the amended bill sets up that it is the desire of the State of Kansas to have the water in the Arkansas river run into and across the State of Kansas without diverting it from the bed of the stream, and the result of this suit should be to prohibit both the people of Colorado and western Kansas from taking water from the stream, it would be a disadvantage to the people in Kansas living west of Kinsley. *They are certainly*

not in sympathy with any movement which would look to the abrogation of the doctrine of irrigation." (602.)

STOTTS. "If the water were running in the river and the people of this county were not allowed to use it for irrigation, *it would be an injury to the people of this county.*" (608.)

FOLSOM. "My recollection is that in 1883 there was water most of the time during the summer season. I know I was irrigating a great deal of the time at that season in 1884 and 1885. I was on the Great Eastern ditch and the supply was not so good. I consider that irrigation is essential in this country to make sure and successful crops, and it *is of vital importance to the people of western Kansas to secure sufficient water for the irrigation of land.*" (610.)

GRIGGS. "The people of this county are interested in the use of this water for irrigation * * *. *It would be very much to the detriment of this community if this water could not be used for irrigation.*" (612.)

PATTERSON. "The Kansas ditch was in the hands of a receiver for some time. It was very likely that the fact that the company was practically bankrupt and its property in the hands of a receiver had something to do with the fact of its not being kept in repair and not used so much for irrigation. But the ditch didn't hardly pay running expenses. That had something to do with it. That fact, as well as the shortage of the water had something to do with this dilapidation * * *. So far as the people of this county and the counties to the west are concerned, it is of vital importance to them to increase the facilities for irrigation as much as possible." (614.)

"I have heard the people of this vicinity speak about this suit. From my knowledge in this and ad-

joining counties, and from my acquaintance with the people who are dependent upon the land for their support, I believe that the citizens of this and the adjoining counties *would not be in favor of the establishment of a doctrine which would prevent their taking water out of the river for irrigation.*" (615.)

Is it possible that these witnesses have been misinformed as to the real issues in this case, or are we mistaken in our view as to what the issue really is, and that this is really a suit involving not only riparian rights but priorities between irrigators in Kansas and Colorado? And has it been deemed necessary as a sop to allay the suspicions of the citizens of western Kansas to say as counsel do on page 243 of their brief?

"We say that when once the rights of Colorado and Kansas are fixed in the flow of this river, when it is determined by this court to what extent each shall enjoy the use of it, then neither state has the right to say how the other shall use its share of water."

That is to say, that, as a riparian owner Kansas has a right as against Colorado irrigators, to have the water come in to Kansas, and when it gets there, she may do as she sees fit, may let her irrigators have it if she wants to, that being her business, not ours.

The ingenuity of this is charming. The result would then be, if Kansas should succeed in this suit, that having won from us on the riparian doctrine, her irrigators might then win from her riparians by the same doctrine on which we lost.

It would seem that Kansas must have had trouble in lining up her irrigators in this case, or it would have been unnecessary to say anything of that kind.

One of complainant's witnesses (Wright) referring to the early settlers in western Kansas, said that they came in "batches," and some being poor farmers, would stay but a few years, when they would be succeeded by a "new batch," the operation having been repeated several times.

Referring again to the testimony of Mr. Murdock, just quoted, as to the cause of diminution of the underflow, it will be noticed that his first complaint in that respect was *"against the western people of Kansas* and not against Colorado!"

While it appears from the evidence of the engineers and scientists in the case that the theory as to the existence of the underflow or ground waters of the plains is not wholly new, it remained for Mr. Murdock of the Wichita Eagle (when times were dull, booms at ebb, and excuse needed for the failure of one of witness Wright's "batch of poor farmers") to discover not only a new source for the Arkansas valley underflow, but that it contained and could impart to crops and people all the qualities—except eternal life—needful for human happiness.

Thereupon he discovered that the underflow had suddenly disappeared and, looking about for a cause, he settled on the struggling irrigators of western Kansas as the offenders.

For some reason—perhaps reflected by his next year's subscription list—this discovery did not meet with unanimous approval, and, like a skilled newspaper man and with an imagination unhampered by facts, he then decided that the irrigators of Colorado and not Kansas, were the guilty ones and should be prosecuted, if the Wichita Eagle could wield the influence to do it—and it did.

The question thus presented is an important one; not, perhaps, as going to the right of the sovereign state of Kansas to appear as complainant, if she so elects, but whether the facts are as she has alleged, to the effect that Colorado and her people are perpetrating an incalculable injury on the citizens of Kansas as a whole, and also whether the doctrine she contends for, even if unquestioned as law, and any relief she can have, will do her citizens as a whole, a benefit commensurate with, or greater than, the injury inflicted thereby upon the people of Colorado.

It will be observed that Mr. Murdock, the principal promoter of the suit, as quoted above, is forced to admit that four river counties, all lying east of the center of the state and within the *humid* region, procured the legislation authorizing this suit to be brought, while six river counties lying in the *arid* region are not interested on that side, but on the side of irrigation, leaving five river counties—Rice, Barton, Stafford, Kiowa and Pawnee—also in the *arid or semi-arid* region, not accounted for, but presumably, from their location, and as they did not join in the movement, also interested on the other side.

It can scarcely be contended that the determination of Kansas as to what is best for her citizens is conclusive on the court, as the federal government is equally interested therein.

In New York and New Hampshire vs. Louisiana, 108 U. S., 76, the complainants brought suit on bonds of the defendant, which had been assigned to them, obviously for the purpose of giving this court original jurisdiction. The court decided that it had jurisdiction, but that the assignment being for the

purpose of creating a controversy between states, held (as stated in the syllabus) that,

"One state can not create a controversy with another state, within the meaning of that term as used in the judicial clauses of the Constitution, by assuming the prosecution of debts owing by the other state to its citizens."

This implies that the court may determine whether a state is properly representing its citizens in a controversy in this court.

But if such determination by a state is conclusive, the court is certainly authorized to balance the alleged benefit to certain Kansas citizens against the injuries to certain other Kansas citizens, and then carry the credit balance of Kansas' benefits, if any, to to the general equitable account between the parties to the suit and see if it equals or exceeds the benefits, and is also paramount to the injuries to the people of Colorado, all of whom (whether citizens or not) are interested in the result. If it should appear, however, that the benefits and injuries to Kansas citizens themselves are equal, or that the latter preponderate, it would seem that the inquiry need go no further.

It must not be overlooked that, in quoting this testimony, or in subsequent quotations, we have not undertaken to give that given by defendants' witnesses on this subject, but (except as otherwise indicated) are merely quoting a few instances of the many in complainant's evidence to show how unfairly the evidence on its side has been summarized by its counsel.

Nor will we attempt to point out fully the great injury to the people of the Arkansas valley in Colorado and the arid regions generally, nor the deadly effect on the reclamation service which would come from a decision in favor of Kansas. This will be done in other briefs for the defendants and that on behalf of the United States.

We accept as most appropriate, the designation of this case given it by Mr. Murdock when he refers to it as a "racket" commenced by him in his newspaper.

Sixth. The First Cause—The Laws of Nature vs. The Works of Man.

By reason of the operation of peculiar forces, nature fails to provide the eastern half of Colorado (and other arid regions of the mid-continent) with sufficient precipitation of snow and rain to raise crops.

Kansas claims that Colorado has no right to apply water to land in any other way, although she herself claims the right to apply it by underflow.

The mountain ranges constitute an effectual barrier to the passage of moisture in the trade winds from the west. Condensing, as these ranges do by their lower temperature, the moisture of these winds, which would otherwise be partially deposited as rain or snow on the eastern half of Colorado, they cause the precipitation of this moisture in excessive quantities, mostly snow, upon the high ranges, and chiefly on the western slope, where it melts and flows down in streams. The people of Colorado, prevented by these natural causes from receiving this water by direct precipitation on the particular lands where needed, divert it from the streams and apply it by irrigation

ditches to the lands to which it really belongs and upon which it would have naturally fallen but for the mountain barriers.

This, Kansas says, can not be done, and this lies at the bottom of the contention.

If this water had fallen as ordinary precipitation directly on the lands in eastern Colorado, it might have been all absorbed by the soil, or by the citizens caught and retained in reservoirs, cisterns and other receptacles, so that not a drop would reach the Arkansas river or any of its tributaries, and yet no one would have claimed that Kansas had any legal redress.

But because natural conditions have required its appropriation and application in a different way, it is claimed that all substantial priority of right in the people of Colorado to this water is lost.

If after having overcome the forces set in motion by the Creator, and put their lands under such conditions that the excessive rains and droughts common to the east are not a source of apprehension, but where water, when it is needed, and in such quantities as needed, is under their personal control, the results of their industry are to be destroyed for the accomplishment of a limited and doubtful benefit to a small fraction of the people of another state, so that we can not have even "bread and water" on which to live, the discoveries and advances in irrigation had better never been made.

Or, this arid region had better remained a part of France and under the civil law prevailing in the District of Louisiana, by which the rights of appropriation for irrigation were fully recognized.

We write this at the close of the first week of the destruction of San Francisco and the adjacent coun-

try by earthquake and fire. Yet they tell us that the work of reconstruction has already begun, and that in a few years, at most, it will be complete, and the city of San Francisco greater and grander than ever before.

Be that as it may, if this court shall by any decree, enforcible and enforced, cut off the use of water for irrigation in the Arkansas valley in Colorado, operating as it must upon the whole arid region, the resulting destruction of property in city and country would be beyond conception. Then might probably be fulfilled the prophecy, that "Your land shall be desolate and your cities waste; and *your enemies which dwell therein shall be astonished at it.*"

For from the blight of such destruction there can be no resurrection.

Seventh. The Normal Flow, Not Constant in Early Years.

We state, without any hesitation whatever, that the preponderance of the evidence in the case does not establish a single fact upon which Kansas must rely. Counsel have quoted in their brief just such portions of the evidence in chief given by their witnesses as suits their case, while that portion of the cross-examination of the same witnesses which does not suit their purpose, as well as all the evidence introduced by the defendant, is utterly ignored. Upon this kind of a summary is based their assertion that certain facts are proven. Their brief, we believe, may be searched in vain for an admission that any evidence whatever was given on behalf of the defendants or on cross-examination, in contradiction of their theories. To point out all these omissions would extend this brief

indefinitely. A few instances, on the above subjects, fairly representative of a great number, must suffice.

On the question of normal flow the testimony of Mr. Longstreth, a witness for Kansas, is quoted by her counsel, on page 44 of their brief, in support of the decline in the normal flow of the river, but not a word of his cross-examination is given.

This evidence, with that of others, is then made a basis for asserting, without qualifications, that Colorado irrigation is the cause of this diminution of normal flow.

On turning to Longstreth's cross-examination in the record he has this to say about the diminution:

"I have been up in Colorado along the Arkansas river probably a dozen times in twenty years * * *. As to what I attribute this falling off in the Arkansas river in late years to, I will say this, that I believe if we had as much timber in Colorado as we had twenty years ago, we would have pretty nearly the same flow of water. I think it has a great deal to do with it. I think you are allowing your timber to be destroyed up there, and are destroying yourselves. I lay it more to that than anything else. (587.)

"And it is most assuredly true that the very fact that the flow of the river in the winter has decreased in accordance with the flow in the summer, indicates that something besides irrigation has affected it in part at least. *I think it is the cutting off of the timber at the head of the Arkansas river and its tributaries that is largely responsible for that.* That has been my opinion for years. You retimber the mountains there and you will have the flow of water increased. There is no question about that." (588.)

CRAIG, another of their witnesses, says:

"I know that the timber at the headwaters of the Arkansas river and its tributaries has been largely destroyed by cutting and burning, and of course that will let the snow melt earlier and cause a lessening of the flow in the river during the latter part of the summer in late years * * *. I know that there has been a very large increased area of land put under cultivation in the last ten or twelve years * * *. When you break or plow ground, the rain which falls on it furnishes a much less percentage of run-off than when falling on the native sod. (603.)

"As to the fact that these ditches of which I have spoken as having had ample water for the first few years, and later had not been so well supplied, *I should think it was not entirely due to the lack of water, but to the fact that they were not kept in proper repair or looked after while they were in the hands of a receiver.*

"I know what is meant by return waters. My idea is that the greater the amount you use for irrigation purposes, the greater amount will return. I think if reservoirs were erected in Colorado or western Kansas to catch flood waters that can not now be utilized for irrigation, and the same used for irrigation during the dry season, it would increase the amount of return water and benefit the river all the way down." (604.)

On page 21 of their brief a quotation is made from Pike's report of 1806, in reference to the Arkansas river, as follows:

"I would not hesitate to embark in February at its mouth and ascend to the Mexican mountains, with crafts properly constructed."

This much of Pike suits their purpose.

No one has ever disputed that in flood time there is water enough in the Arkansas, or that a boat with power to stem a twenty-mile-an-hour current might then go through the Royal Gorge, and by skilful dodging of rocks possibly reach Leadville. It has nothing to do with the question of summer flow.

On turning to the printed record, however, we find that there also appears in that same report (and Coues' notes) the following:

"The Arkansaw, on the party's arrival, had no water in it six inches deep, and the stream was not more than twenty feet wide * * *. Our route since leaving Larned has been mostly along the north bank of the Arkansaw. Queer river that—a great ditch chock full of grassy islets stretching through the treeless prairies like a spotted snake, some seasons so dry *you cannot wet your foot in it for miles and have to dig for a drink;* sometimes a raging flood 200 yards wide * * *. It has one singularity which struck me very forcibly at first view, but which, on reflection, I am induced to believe is the case with all the rivers which run through a low, dry, sandy soil in warm climates, *as I observed it to be the case with the Rio del Norte,* viz.: For the extent of 400 or 500 miles before you arrive near the mountains, the bed of the river is extensive and a perfect sand-bar, which at certain seasons is dry, or at least the water is standing in ponds not affording sufficient to procure a running course; but when you come nearer the mountains, you find the river contracted, a gravelly bottom and a deep, navigable stream. From these circumstances it is evident that the *sandy soil imbibes all the (not evaporated) waters* which the sources project from the mountains, and renders the river in dry seasons less navigable 500 than 200 miles from its source." (635.)

This did not suit their purpose, and yet it bears directly on the issue of normal flow.

Reports, also, of other early explorers, made years before irrigation in Colorado, evidence of army officers without interest, scientific men, Kansas citizens and pioneers, going back a half century, nearly 100 in all—an array of witnesses whose knowledge and truthfulness is beyond question—agree that the river was almost, if not quite, every year, as above described, and they stand irreconcilably opposed to a few interested first-bottom farmers in Kansas. Yet counsel close their eyes to all this, and with a dogmatic assumption unequaled in our experience, on page 32 of their brief, say:

"The flow of the Arkansas river, prior to the time when the waters were diverted for irrigation purposes in Colorado, about the year 1890, covering a period of time beginning with the earliest records, information or observation of witnesses, was as *constant and as uniform as the flow of the ordinary river.*"

We now muster in parallel columns the witnesses on normal flow, one of the principal fact questions involved in the case, giving in substance the most pregnant statements of defendants' witnesses, and treating the record made by early explorers and scientific investigators, although unsworn, as equivalent to a statement under oath.

The tables also show, wherever it appears in the evidence, the years (inclusive) during which the observation was made, and the residence and occupation of the witness at the *time* of the observation, also the page of the record where the evidence is found:

TABLE A—NORMAL FLOW—COMPLAINANT'S WITNESSES.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
1	Murdock, Kan.	Editor.	Constant	1860 to 1891	255
2	Mulvey, Kan.	Surveyor	Constant	1879 to 1900	267
3	Harrison, Kan.	Farmer	Constant	1871 to 1886	273
4	Jurgensen, Kan.	Farmer	Constant.	1878 to 1888	279
5	Huss, Kan.	Farmer	Constant	1871 to 1881	282
6	Tupper, Kan.	Farmer	Constant	1871 to 1894	284
7	Hansen, Kan.	Farmer	Constant	1870 to 1892	286
8	Reese, Kan.	Farmer	Constant	1878 to 1890	293
9	Shive, Kan.	Farmer	Constant	1885 to 1894	300
10	Rutledge, Kan.	Farmer	Constant	1871 to 1886	302
11	Shive, J. W., Kan.	Farmer	Constant	1871 to 1894	309
12	Lawrence, Kan.	Farmer	Constant	1870 to 1890	318
13	Campbell, Kan.	Farmer	Constant	1877 to 1890	334
14	Fullington, Kan.	Farmer	Constant	1881	340
15	McCanless, Kan.	Merchant	Constant	1869 to 1879	344
16	Lewis, Kan.	Banker	Constant	1876 to 1894	351
17	Caldwell, Kan.	Real estate	Constant	1850 to 1861	353
18	Patton, Kan.	Farmer	Constant	1882 to 1891	364

TABLE A—NORMAL FLOW—COMPLAINANT'S WITNESSES—Concluded.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
19	Franey, Kan.	Street comm'r.	Constant	1880 to 1887	367
20	Keller, Kan.	Farmer	Constant	1885 to 1891	375
21	Myrtle, Kan.		Constant	1871 to 1886	381
22	Bonsall, Kan.	Surveyor	Constant	1872 to 1887	383
23	Sleeth, Kan.	Water power	Constant	1870 to 1894	388
24	Woodin, Kan.	Water power	Constant	1882 to 1893	391
25	Denton, Kan.	Farmer	Constant	1880 to 1890	393
26	Benedict, Kan.	Hardware	Constant	1870 to 1894	396
27	Stevenson, Kan.	Farmer	Constant	1870 to 1890	401
28	Speers, Kan.	Farmer	Constant	1870 to 1887	404
29	Hoyt, Kan.	Farmer	Constant	1870 to 1890	408
30	Hess, Kan.	Real estate	Constant	1877 to 1887	412
31	Edwards, Kan.	Banker	Constant	1875 to 1888	424
32	Wellman, Kan.	Farmer	Constant	1885 to 1890	435
33	Vernon, Kan.	Lawyer	Constant	1875 to 1888	441
34	Wright, Kan.	Freighter	Constant	1859 to 1892	444
35	Beeson, Kan.	Farmer	Constant	1875 to 1891	457
36	Bell, Kan.	Real estate	Constant	1874 to 1900	472

37	Gallagher, Kan.	City clerk	Constant	1877 to 1892	475
38	Chambliss, Kan.	Farmer	Constant	1877 to 1892	479
39	Suttor, Kan.	Lawyer	Constant	1876 to 1889	482
40	Laird, Kan.	Farmer	Constant	1898 to 1904	484
41	Reighard, Kan.	Farmer	Constant	1869 to 1890	486
42	Pierce, Kan.	Farmer	Constant	1879 to 1890	542
43	Stillwagon, Kan.	Farmer	Constant	1882 to 1892	549
44	Reeve, Kan.	Farmer	Constant	1880 to 1890	554
45	Worden, Kan.	Farmer	Constant	1885 to 1893	560
46	Pyle, Kan.	Real estate	Constant	1885 to 1895	566
47	Diesen, Kan.	Farmer	Constant	1885 to 1893	574
48	Longstreth, Kan.	Farmer	Constant	1873 to 1887	582
49	Loucks, Kan.	Real estate	Constant	1879 to 1887	593
50	Craig, Kan.	Farmer	Constant	1879 to 1890	597
51	Stotts, Kan.	Farmer	Constant	1880 to 1890	605
52	Folsom, Kan.	Farmer	Constant	1882 to 1885	610
53	Griggs, Kan.	Farmer	Constant	1882 to 1890	611
54	Patterson, Kan.	Farmer	Constant	1886 to 1892	612

TABLE B—NORMAL FLOW—DEFENDANTS' WITNESSES.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
1	Carpenter, Colo.	State Engineer.	"Broken river"		625
2	Pike	Explorer	"A perfect sand-bar"	1806	635
3	Coues	Army surgeon	"Dig for a drink"	1806	634
4	Flint	Historian	"Can wade it"	1833	635
5	Parkman	Explorer	"Scant threads of water"	1846	635
6	Garrard	Explorer	"Almost dry"	1846	636
7	Beckwith	U. S. Army	"Dig for water"	1851	637
8	Hale	Historian	"Sinks into the sand"	1853	637
9	Davis	Explorer	"Very shallow"	1853	637
10	Dodge	Explorer	"Perfectly dry"	1876	638
11	Ford Co. Globe, Kan.		"Suddenly dried up"	1879	639
12	Smythe	Scientist	"River dry"	1883	639
13	Powell	Chief Geo. Sur.	"Thin sheets of mud"	1878	658
14	Long	Explorer	"Bed of yielding sand"	1819	641
15	Fowler	Trapper	"Large sand-bars"	1821	642
16	Chittendon	Historian	"Totally dry"		642
17	Henry, Kan.	Farmer	"Broken stream"	1867 to 1883	694
18	Wiggins, Kan.	Scout	"Dig for water"	1838 to 1854	739

19	Baldwin	U. S. Army	"Dig for water"	1866 to 1871	745
20	Hegwer, Kan.	Farmer	"River dry"	1857 to 1879	749
21	Berthoud	U. S. Army	"Couldn't get any water"	1863	781
22	Monahan	U. S. Army	"No running water"	1861	784
23	Beatty	U. S. Army	"No running water"	1863	787
24	Newton, Colo.	Drover	"The river was all dry"	1879	788
25	Roberts, Kan.	Live stock	"No running water"	1871	790
26	Perry	Prospecting	"Very little water"	1870	793
27	Galbreath, Kan.	Traveling	"No water"	1861 to 1868	795
28	Swanson, Kan.	Hunter	"No running water"	1868 to 1870	801
29	Gallena, Kan.	Hunter	"Eight feet wide"	1866 to 1888	809
30	Spencer, Colo.	Freighter	"Dig for water"	1859 to 1864	814
31	Finley, Colo.	Stock	"Little bed of water"	1860	817
32	Bott, Colo.	Traveling	"Crossed dry shod"	1858	818
33	McAllister, Colo.		"It was dry"	1873	822
34	Pyle, Kan.	Publisher	"No running water"	1887 to 1889	827
35	Sheldon, Colo.	Surveyor	"No water"	1860	831
36	Sitlington, Colo.	Farmer	"No running water"	1870	834
37	Logan, Kan.	U. S. Army	"Perfectly dry"	1863 to 1864	844
38	Beckham	Traveling	"No running stream"	1862	845

TABLE B—NORMAL FLOW—DEFENDANT'S WITNESSES—Continued.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
39	McCanless, Colo.	Traveling	"No water flowing"	1864	847
40	Ross, Colo.	Freighter	"It was dry"	1861	848
41	Gilbert, Colo.	Farmer	"No flowing water"	1882	852
42	Thomas	U. S. Army	"No water in sight"	1864	854
43	Baxter	U. S. Army	"No flow of water	1864	857
44	Conley, Colo.	Contractor	"No water in it"	1860	860
45	Lull	Traveling	"No running water"	1872	865
46	Withers	Traveling	"No water"	1862	867
47	Schmidt, Kan.	Com'r Em.	"Most always dry"	1873	868
48	Sanderson, Kan.	Staging	"No water in river"	1866	876
49	Watson	Traveling	"No running water"	1863	877
50	Bourne	Prospector	"No water in river"	1873	879
51	Smith, Colo.	Hunting	"Water only in pools"	1858 to 1862	881
52	Gobin, Kan.	Ferryman	"Waded it at Wichita"	1877 to 1885	887
53	Fosdick, Kan.	Traveling	"No running water"	1861	889
54	Beatty, Colo.	Freighter	"Dig for water"	1864	892
55	Best, Colo.	Drover	"No running stream"	1871	902
56	Stauffer, Kan.	Farmer	"No running water"	1879 to 1893	904

57	Swink, Colo.	Farmer	"No water"	1875 to 1880	913
58	Potter, Colo.	Drover	"River was dry"	1879	919
59	Lynch, Colo.	Surveyor	"No water at all"	1867 to 1890	926
60	Murray, Colo.	Farmer	"The river was dry"	1873	929
61	Irwin, Kan.	Farmer	"Scrape for water"	1872 to 1873	931
62	Murphy	U. S. Army	"Crossed it dry shod"	1867	933
63	Doughty, Kan.	Lawyer	"Practically dry"	1878 to 1884	935
64	Thomas, Kan.	Farmer	"Dig for water"	1879 to 1886	939
65	Gores	U. S. Army	"Entirely dry"	1868	946
66	Crittendon, Kan.	Farmer	"River dry"	1881	947
67	Donohue, Kan.	Farmer	"River dry"	1871	951
68	Rich, Kan.	Farmer	"Sometimes no water"	1885 to 1888	956
69	Baird, Kan.	Farmer	"Almost dry"	1889 to 1892	958
70	Jones	Freighter	"Crossed without wetting feet"	1868 to 1869	959
71	McMillan, Kan.	Farmer	"No running water"	1879 to 1886	971
72	Johnson, Kan.	Merchant	"Dry for weeks"	1879 to 1885	972
73	Bobbenreith	U. S. Army	"Dig for stock water"	1867 to 1868	973
74	Sager, Colo.	Farmer	"River was dry"	1873	982
75	Johnson, Colo.	Farmer	"No running water"	1875 to 1877	984

TABLE B—NORMAL FLOW—DEFENDANT'S WITNESSES—Continued.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
76	Thompson, Colo.	Stock	"Perfectly dry in places"	1862,'64,'72,'77-8	986
77	Packer, Colo.	Drover	"Running a little"	1871	989
78	Houser, Colo.	Drover	"No running water"	1877 to 1878	993
79	Hart, Colo.	Drover	"Absolutely dry"	1875 to 1879	998
80	Taylor	Traveling	"River was dry"	1859, '62, '65	1004
81	Capps, Colo.	Drover	"Places where no water"	1870, '77, '79	1010
82	Albert, Colo.		"Didn't find any water"	1869 to 1872	1020
83	Block, Kan.	Publisher	"Pretty much as now"	1886 to 1889	1455
84	Nolan, Kan.	Stock	"Had to dig for water"	1880	1466
85	Hogbin, Kan.	Surveyor	"River was dry"	1879 to 1883	1471
86	Hill, Kan.	Farmer	"River went dry"	1871 to 1879	1495
87	Evans	U. S. Army	"Got dry in the fall"	1862, '64, '65, '73	1506
88	Sidlow, Kan.	Farmer	"Perfectly dry"	1879	1511
89	Spencer	U. S. Army	"Dry in early years"	1870 to 1901	1646
90	Juneau, Kan.	Lumber	"Dry"	1876	1533
91	Lee, Kan.	Stock	"Water in holes"	1877, '83-4-5	1547
92	Payne, Kan.	Farmer	"Same for 30 years"	1873 to 1904	1552
93	Leasure, Kan.		"Some years dry"	1873 to 1893	1567

94	Brinkman, Kan.	Lumber	"River dry"	1874 '78, '80	1570
95	Thorp, Kan.	Farmer	"Dry"	1878 or 1879	1576
96	Moses, Kan.	Mayor	"No water"	1879	1584
97	Norris, Kan.	Farmer	"Dry part of year"	1880 to 1890	1587
98	Gibson	U. S. Army	"No flow of water"	1863	1589
99	Bidleman, Kan.	Farmer	"Dry in early days"	1878	1593
100	Williams, Kan.	Farmer	"Dry"	1879 to 1890	1596
101	Lewis, Kan.	Farmer	"Dry in those years"	1874	1603
102	Tyler, Kan.	Real estate	"Some years dry"	1888 to 1895	1607
103	Stevens, Kan.	Farmer	"It was dry"	1863 to '65, '67 to '70	1525
104	Brown, Kan.	Farmer	"Had drys and floods"	1870 to 1880	1660
105	Loshbaugh, Kan.		"Dry several times"	1870 to 1890	1666
106	Tucker	U. S. Army	"No running water"	1863	1674
107	Schaefer	U. S. Army	"River was dry"	1854	1683
108	Dofflemyre, Kan.	Farmer	"Dry as often as now"	1874 to 1886	1692
109	Hall, Kan.	Farmer	"Often dry"	1870 to 1889	1703
110	Williams, Kan.	Farmer	"More dry beds than now"	1871 to 1881	1707
111	Sites, Kan.	Farmer	"Ceased to flow"	1885	1712
112	Lumbert, Kan.	Farmer	"Entirely dry"	1877	1723

TABLE B—NORMAL FLOW—DEFENDANT'S WITNESSES—Concluded.

	NAME AND RESIDENCE.	OCCUPATION.	RIVER CONDITION.	YEARS.	PAGE.
113	Winters, Kan.	Farmer	"Dry oftener than now"	1869 to 1879	1735
114	Dotson, Kan.	Farmer	"Dry oftener than since"	1871 to 1881	1749
115	Carson, Kan.	Farmer	"Less water than now"	1880 to 1890	1763

We have left off this muster roll some witnesses on that subject introduced by Kansas in rebuttal. These witnesses were called after defendants had concluded their evidence, and because, as we suppose, the case in chief, was not strong enough for Kansas to suit her counsel. All this evidence was objected to as inadmissible and should not be considered by the court.

It is, however, subject to the same criticism and analysis that we will make on that introduced in chief and really adds in no way to the strength of Kansas' case.

The witnesses for Kansas whom we have named, testified in effect on direct examination that the river was not "dry" in either of the years mentioned (the dates being inclusive) but did not claim that the flow was regular in volume, and the word "constant" as above applied to the flow, is used as fairly conveying their meaning, that being the word also used by counsel on page 32 of their brief, as describing the flow as it was in earlier years.

These witnesses are all residents of Kansas, and all interested to have her succeed; that is, according to their undertanding of the issue, some thinking it to be adverse to irrigation, and others, that it is favorable thereto.

Admirable tact has been displayed by someone in keeping the house from being divided against itself as to which side should succeed in the suit, while at the same time they differ as to the consequences.

It will thus be seen that 54 witnesses have testified that the flow of the river from about 1860 to 1894, so far as observed by them, although varying in volume in the dry season, was constant, while 115 wit-

nesses for defendants (although not all being able to cover every year of that period, have, as a whole, covered all the years), have testified that the river was dry at *some point* and *period* in *each* of the years to which they refer.

About 50 of Colorado's witnesses are residents of Kansas, and interested for her success in this suit, if it means irrigation, as they believe it does. Many of these are from Hutchinson.

The evidence from unsworn reports of government explorers and the testimony of officers and soldiers as to facts observed in the performance of duty, under circumstances absolutely conclusive against any prejudice or bias one way or the other, we believe should be regarded as importing almost a verity and that no number of interested witnesses should overthrow it.

Upon the foregoing comparison, so far from a preponderance being with Kansas on that question, it seems to us that it is conclusively established that the absence of water in the Arkansas river at some time and place in the dry season of every year since it has been known to white men, has been *dry* and substantially as Kansas claims it has been for the last 10 or 15 years.

The presentation above made is on the basis, so far as Kansas is concerned, that her witnesses each, throughout his cross-examination, made good his statement on direct, that as observed by him the flow was "constant" and the river never "dry" in those years, thus giving Kansas all that her counsel could possibly claim from their evidence, and more than can justly be claimed for it, for the reason that on cross-

examination, some of the witnesses admitted to dry years, as follows:

No. 3, HARRISON, says:

"In 1874 the river was practically dry at my place. I have never seen it as dry at any time since; it came pretty close to it several times, but I can't give dates." (278.)

No. 7, HANSEN, says:

"The river was entirely dry during a portion of the season of 1874." (289.)

No. 10, RUTLEDGE, says:

"From about 1888 to 1902 the river generally went dry in the month of August and remained dry until probably October." (302.)

No. 17, CALDWELL, says:

"There was one very dry year between Wichita and the Colorado state line, between 1850 and 1861. During that year there were miles along the river at different places where there was practically no flowing water in the river." (360.)

No. 26, BENEDICT, says:

"I recollect a year, about 1874, when it was very low and nearly dry. In those early days there were times when there was very little water running in the river." (399.)

No. 34, WRIGHT, says:

"In 1859 the river got pretty low in September. In those early years the river went dry once every three or four years, along in September." (446.)

No. 36, BELL, says:

"I thought it was dry in 1872. In 1874 it was very dry, I think." (474.)

No. 48, LONGSTRETH, says:

"I say I never saw the stream at any time of the year when there was not running water in it at this point and from here west. (Garden City.) I saw it dry east of here, though. I saw it dry at Hutchinson. (585.) I knew as much about the river at Hutchinson from 1873 up to 1880 as I did up to this point. I was employed on the road, and my work carried me along the road from Hutchinson to the state line. I was going back and forth, so that I was familiar with all the river between Hutchinson and the Colorado state line. I think it is a fact that at Hutchinson, Kansas, during the period from 1873 on up to the present time, the river has been dry at various times during the season, in almost every year, or the majority of them." (586.)

No. 51, STOTTS, says:

"Yes, I believe I said that the river was dry in 1887." (608.)

It will be noticed that Mr. Longstreth refers particularly to the condition of the river at Hutchinson, Reno county, as having been almost every year dry. Hutchinson seems to have been one of the dry points on the river, and it is not singular that Kansas called on this point but one witness (Mr. Caldwell) who lived in Reno county.

This closer analysis of the evidence for Kansas on this point lessens the numerical force on her behalf nine and practically adds an equal number to defendant's side.

This, however, is its least important bearing. Longstreth's direct examination on this subject was carefully confined to the river at a point near Garden City, where he had a ditch and where he said the river did not go dry, owing no doubt to local conditions. That much of his evidence is quoted by counsel on page 44 of their brief as if it applied to the *whole river.*

His cross-examination above quoted by us however, so far as any man's testimony can be, is conclusive that at Hutchinson it *was dry at some time almost every year* from 1873 to 1904!

His business on the road along the river was from 1873 to 1880 or later.

Another important feature in the analysis of the evidence on this subject is that the majority of witnesses for Kansas testify as to the river conditions at particular points, and their testimony in that respect does not cover the whole river from Wichita to the Colorado state line, at any time.

Care should have been, and of course presumably was, exercised in selecting, as far as practicable, witnesses who lived at point where there were pools or local conditions which prevented the river going entirely *dry* at any time.

On the other hand, the witnesses for defendants testify that at *some* point, where they viewed it (not necessarily at any particular point referred to by Kansas' witnesses), it *was dry* during certain times in certain years, and they cover every year one or more times from 1855 to 1893, besides reaching back to 1846, 1833, 1819 and 1806.

So, it is possible that Kansas' witnesses, in the main, may have testified truthfully as to the *places*

which they saw and *when* they saw them, and defendants equally so as to the *places they* saw and *when* they saw them, and that there is not necessarily any conflict between them.

Besides this, Kansas' witnesses, even those residing near the river, may not have given particular attention to the condition of the river at all times, so their evidence is somewhat negative in character, while the explorers, pioneers and others who, for the first time, saw a *"dry river"*—a *revelation* to them—could not be mistaken or forgetful.

Finally, then, on this subject, the evidence for Kansas that at *certain places* the river did *not* go dry, falls far short of establishing the real fact in controversy, namely, that at *no place* between Wichita and the Colorado state line *did* it go dry in those years.

In short, proof that at *one* particular point the river was not actually dry, does not prove a *"constant"* flow throughout its length in Kansas, while proof that the river was *dry* at *any* point does prove that the flow was *not "constant."*

Kansas could only make out a case of "constant" flow by evidence covering every year and every day in the year and the entire river from Wichita to the Colorado line.

Eighth. The Underflow, its Extent, Source and Effect.

On the question of underflow, Mr. Wright of Dodge City, their own witness, quoted by Kansas counsel on page 78 of their brief, in support of the question of the *existence* of the underflow, on cross-

examination testified, in referring to a well 400 feet from the river:

"I venture to say that the water in that well is three or four feet higher than the water in the river. At different places, as you go up the hill side, that increases. I think, possibly, that within 400 feet of the river you can find the water level four feet or more higher than the water in the river. I think that it is from the underflow. In my judgment, this underflow comes from the *entire drainage of the Arkansas river.* As the water drains from these highlands on either side of the river it strikes this well." (452.)

MR. CRAIG, also their own witness:

"I think that the sheet or ground water in this valley follows the contour of the surface of the country * * *. I know enough of the lay of the country and the depth of the water to know that when we go back from the river it is some higher than the river * * *. It is true that it may *have come from rainfall* that goes into the ground and strikes a stratum and follows that." (605.)

The testimony of these witnesses as to the *existence* of the underflow was satisfactory, but as to its *source,* whether from the river or the adjacent highlands, their evidence did not fit counsels' theory, and therefore it, with all the evidence on defendants' behalf, in that respect to the contrary, is totally ignored, and with their usual *ex cathedra* manner, they say, on page 69:

"Connected with the flow of the Arkansas river, and as a part of it and *dependent upon it,* is the underflow of the Arkansas valley."

Then referring to wells and tributaries, scientific and experimental tests made (on the same page), they say:

"Each and all have proved the presence of the underflow, its current, its expanse to the foothills, and its *unvarying dependence upon the flow of water in the Arkansas river.*"

After making this assertion they quote from the evidence of Prof. Slichter, a witness for the government, in their brief, page 90, where he refers to the rising of a well 400 feet from the river, within three hours of the beginning of the flood in the river:

"As to how to account for that, I will answer that that is a very common fact. The ground-water wave is changed very rapidly by any change of pressure at any place. The wave is transmitted with a fairly high velocity, similar to the observation we frequently make where a tide in the ocean affects a well a considerable distance from it with a lag of only a few hours * * *. I expect that flow in the river would contribute to the raising of the level of the ground water near the river."

And, on page 93 of their brief, Mr. Willard D. Johnson is quoted as saying:

"To the westward the river runs below the upland level of the ground-water. The ground-water there contributes to its flow. To the eastward it runs above and is depleted in turn.

"In the neighborhood of Garden City the river receives contributions on the one side and on the other loses."

After quoting these two witnesses, and seeing, apparently, that it did not support the bold announcement made at the commencement of their discussion of underflow, they say, on page 94 of their brief:

"It may be true that in some places above Garden City two-thirds of the contributions to the ground-water may come from rain and only one-third from the flood in the river."

It is to be observed that Mr. Slichter testifies that he is consulting engineer for the United States Geological Survey and that he made these investigations in 1901 and 1904 under the instructions of the government authorities, and that they were to ascertain whether it would be practicable to recover the ground-water under the Reclamation Act for the irrigation of land adjacent to the river, and that, in order to do that, it was necessary to determine the amount and availability of the ground-water supply and its source and velocity; that he put down a large number of wells (pages 1334 and 1335); that, while the greatest fluctuation occurred in the wells that were very close to the river, those remote from the river showed only a *"seasonal"* change; that the most remote wells in which he noted the fluctuation, were 900 feet from the river on the north side. And he then says:

"We concluded from our investigation that the *major portion of the ground-water came from the rainfall on the land north and south of the river.* We were able to conclude that a very large portion of it originated in rainfall * * *. On the night of June 21 a heavy rain of nearly one inch fell. The next morning observations in the test wells, 400 feet and 1,100 feet from the river, showed a marked rise in the level of the water * * *. The level of the water in the Arkansas river remained stationary until 3 p. m. of June 22, when a sudden flood swept down the river. In spite of this flood, in the river, *the water level fell* during the period of flood in the test

well, 1,100 feet from the river. In the well located 400 feet from the river a slight rise of the water level was noticed, amounting to one-tenth of a foot. Following this the ground-water fell in both of the test wells nearest the river." (1336.)

Similar experiments were made by Professor Carpenter, the state engineer of Colorado and others, and similar results shown, and the evidence generally is overwhelming in favor of the proposition that the principal source of the underflow in the Arkansas river is from the adjacent highlands. All this counsel have overlooked!

Nor do their own witnesses agree as to the *value* and *effect* of the underflow.

WARDEN, their witness, says:

"I didn't say that I attributed the falling off of my crops and the dying out of my alfalfa to the fact that the water had been lowered in this ground. I do attribute it to the *lack of irrigation and grasshoppers.*" (562.)

REEVE:

"There is alfalfa here in the bottom that has stood twenty years, to my certain knowledge. Some of it has been injured by the lowering of the water below the bottom land. *Some of it is shallow enough yet to be plenty wet.*" (558.)

So much for the source and effect of the underflow. How thoroughly this underflow theory has impregnated some of these Kansas farmers, and with what easy grace it defies the law of gravity, is seen in other testimony of Mr. Reeve, who says:

"I helped to put a well down at Scott City * * *, thirty-six miles north of the Arkansas river; the same sheet of water we have here (Garden City) extends as far north as Scott City. *I know that to be a fact.* It was about twenty-eight or thirty feet in depth that we found the water * * *. *That was the top of this underflow* * * *. I don't know how much higher Scott City is than the Arkansas river, only judging from the depth of the water." (556.)

On turning to the map (Exhibit 3) at the end of the Colorado brief, it will appear that the altitude at Scott City is.....2,971 feet.

At the river at Garden City, the nearest point .....2,836 feet.

Difference ..... 135 feet.
Deduct depth of well..... 30 feet.

Leaves ..... 105 feet.

These elevations are established by Bulletin 160 U. S. Geological Survey introduced in evidence. (1839.)

This 105 feet represents the altitude of this playful underflow *above its alleged source* at the river—possibly a surviving product of the Kansas boom of 1887!

We do not criticise the failure of counsel to quote unfavorable evidence. What we complain of is the giving of the direct examination of their witnesses, without reference to their cross-examination, as a fair deduction from their entire evidence, and the bold assumption that such and such facts are established, without the slightest intimation that there is any contradiction in the evidence, or that

there can be any difference of opinion as to what the evidence proves.

That the underflow has its principal source in the river is a mere theoretical absurdity, contrary to the best evidence in the case, the light of nature and common experience. They claim that it is peculiar to the Arkansas river, and yet there is no known difference in the soil strata there and in other adjacent streams. It is a geological fact, undisputed except by a few interested citizens of Kansas and her counsel in this case, that the underflow or ground water of the plains comes from two sources, viz., the precipitation on the plains, and that which occurs in the mountains and enters the upturned edges of the strata there, all of which tends towards the valleys and streams, rather than away from them.

The rising of the underflow near the river, when the river is high, is because the volume of water in the river operates as an obstruction or dam to the underflow from the hills, as stated by Mr. Schlichter, Carpenter and others, causing it to sometimes rise as the river rises, and sometimes fall when the river falls, the extent of rise and fall being dependent on the porousness of the soil and the pressure of the ground water from the hills.

Even if this underflow source was wholly in the river it involves no riparian right; much less is it a riparian right to have the water in the river operate as a dam to hold back the underflow.

The decline of the underflow in general, if true, like the decline of the rivers of the West, as is shown by the evidence of Carpenter, Newell and others, is due to cultivation and consequent absorption on the adjacent highlands.

There is absolutely no proof that if the water were let alone in Colorado the underflow would return, even if it came from the river.

Their witnesses say that remarkable changes have taken place in the river during the last twenty years; that the banks have changed, the bed has risen, etc. Is it not probable that the deposits in the river bed during these years, from mines, reduction works and farms, causing these changes, may have been of such an impervious character that the river water does not now penetrate so as to reach the underflow at all?

Indeed, some of their witnesses say that even during high water the underflow does fail because of the elevation of the river bed above the porous substratum.

If this is true, may not this dear underflow (of questionable paternity) have gone, never to return, no matter how much water might run in the stream? If so, this court can not restore it by decree; the damage is done beyond repair.

It also appears that many of the former irrigating ditches in western Kansas have been put in order, and, with many that have never been out of order, are now using water, and it is not and can not be shown that if all the ditchs in Colorado were cut off, that any water would, in the crop season, pass the headgates of these Kansas ditches and reach the riparians below.

Ninth. The Effect on Kansas Lands and Industries.

The comparison of assessed valuations of a few forties of Arkansas first bottom lands in early years, with later periods, is of no value. Kansas in her earlier history had no normal conditions. She was either booming or bleeding. One of her own historians has

written that she was "not then a state, but a university," where people were educated and moved away to biuld up other states.

Besides, it is common knowledge and history that from 1882 to 1892, the whole west was booming; land and everything else reached prices never since attained, and first bottoms in the Arkansas valley presumably were no exception. All Kansas felt the subsequent decline and in a few years the valuation of the state declined over $21,000,000.

These vacillating conditions in early Kansas are also shown by the testimony of Mr. Wright, given in 1889, as a witness before a senate committee on Irrigation and Reclamation of Arid Lands, a portion of which is incorporated in the record of this case (he being a witness for Kansas here) as follows:

"The Chairman: What do you mean by 'two or three crops of emigrants?'

"Mr. Wright: What I mean by that is this: Different batches of emigrants have come into the country and about half of them after two or three years' trial have left. Some stay a little longer than others. Some have remained four or five years and have then gone away and a new batch has come in. That has repeated itself, I think, three or four times since I have been here.

"The Chairman: Is it possible to farm in this part of the country, the western part of Kansas, west of Great Bend, without irrigation?

"Mr. Wright: It is only partially possible. They raise a very sorry crop here without irrigation.

"The Chairman: Can a family make a living on the ground by farming?

"Mr. Wright: Not one out of five, I should say. The rain comes in streaks here. Some cultivate the

soil a little better than others, perhaps, and a few have money, but they are the exception." (451.)

Wright then proceeded with the testimony in the case at bar, as follows:

"That correctly described the conditions that existed up to that time (1889). We had in those days good farmers and poor farmers. Some of the good farmers made a success of it, made money and the poor farmer failed, and fail now. I think there is no doubt that there has been a general improvement in this country in the raising of crops since that evidence was given in 1889." (451.)

Others of their witnesses testified as follows:

CALDWELL: "Undoubtedly there are places where the valley lands are improved by having the water removed a little further from the surface." (358.)

HARRISON: "My land is more valuable to-day than it has ever been in the past, and it would sell for more on the market to-day than it ever would at any time in the past. This is true, generally speaking, of the lands lying along the Arkansas river in Sedgwick county, and I believe that to be true in the county of Harvey." (276.)

REEVE: "There are thousands of acres in this county along the river where they have gotten alfalfa rooted with nothing but the rainfall, that never was irrigated. There is alfalfa here in the bottom that has stood 20 years to my certain knowledge. Some of it has been injured by the lowering of the water below the bottom land. Some of it is yet shallow enough to be plenty wet." (558.)

"I know something of the assessed valuation of land in this county. The assessed valuation has not been changing very much in this county in recent years. Land has advanced here, but nothing compared with some parts of the state, and the ranging and grazing land has advanced in proportion a great deal more than lands along this bottom—than the farming lands along the ditches, but the bottom lands have advanced somewhat. I do not know of any land in this locality that has declined, and nowhere else. Lands have advanced generally, I think, all over the country." (559,)

Caldwell lives in Sedgwick and Harrison in Reno County, both counties which promoted this suit.

2. The alleged injury of the Arkansas City water power solely by the diminution of water, is altogether incredible, even if it was supported by the evidence. Every observant man can recall where enterprises of this character, once flourishing, became worthless by reason of conditions of competition, transportation and the like. That a factory of any kind should fail simply because it had to substitute steam for water as motive power, is beyond belief. In fact, most modern industrial concerns whose main dependence is upon water for power, have steam power to supplement the water in case of accident or scarcity.

On page 105 of Kansas' brief is a reference to this water power and the testimony of their witness, Hess, who says, "we boomed it and talked it, and it was our religion." That much of Mr. Hess's testimony seemed to be very satisfactory to the counsel, but immediately following that, on the same page in the printed record and without the intervention of anything but a period, Mr. Hess testified to some

things, evidently not so satisfactory (which they do not quote) as follows:

"Now, we have a better town and we are relying on making it better still. We expect to make it one of the best in this state * * *. I don't know but what steam power has its advantages over water power * * * the chair factory did not fail by reason of the uncertainty of water * * *. It is a matter of natural pride to us here to have the best city in the state and to make it one of the best. Our rival towns have pointed with pride to the fact that our water power is no longer a good water power, and I would say that, in a general way, it has hurt us. How much, I couldn't tell * * * it is my understanding that Wichita has a better freight rate on flour and grain than this town. That would surely have some effect on the building up of the town and its business. I know that freight rates upon merchandise in and out of town cut a very important figure as to the growth and prosperity of the town. It is a fact that Arkansas City has had disadvantages in freight rates that have worked against our town." (422.)

It seems that Arkansas City was more the victim of freight rates than water rates, and that the city of Wichita had much to do with its alleged decadence and should have been made a party defendant.

In looking through the evidence given by other citizens of Arkansas City on behalf of Kansas, it appears that competition, ice, back water and various other circumstances brought about the use of steam power in such mills as finally outlived the conditions following the boom. It would seem to be wholly unnecessary to turn the searchlight on Colorado to look for the cause of the failure of the Arkansas City boom. And yet in their brief, page 106, counsel close their chapter on this subject as follows:

"No one can estimate the loss in dollars and cents to the business interests of Arkansas City and Cowley county in the loss of revenue to the State of Kansas within this territory by the depletion of the waters in the river and the loss of this costly, but cheap, water power so utilized at Arkansas City * * * and this injury furnishes another ground of complaint and adds to the force of the prayer for relief."

3. Kansas' counsel on page 184 of their brief assert that the revenues of the State of Kansas have been materially decreased and the general prosperity of a vast region and of a considerable population has been impaired beyond computation.

The above citations from the evidence cover but few of the instances where the witnesses for Kansas contradict the statement of her counsel as to what was proven on this point, and are cited by us simply to show *in this brief* that our charge of unfair presentation in this respect is not unfounded.

In the brief for Colorado, beginning at page 9, quotations of like effect from the cross-examination of 18 of Kansas' witnesses in chief will be found.

After the defendants had closed their evidence on this point, Kansas counsel undertook to cumulate on it by way of rebuttal, as they did on several other points involved in the case.

From their witnesses introduced in rebuttal on this point, 18 admitted on cross-examination the same in effect as above, so that we have 36 of Kansas' witnesses contradicting her counsel's assertion. The number of witnesses on defendants' behalf also refuting it, is 43, if none have been overlooked, and their names will be found on pages 29 and 30 of the Colorado brief, with quotations from their evidence.

4. Kansas, in her amended bill, alleges that, besides her parental relation to her citizens, she had a personal proprietory interest in the land on which two of her public institutions were situated, and that they had been damaged by the diminution of the underflow. Counsel do, we believe, say something about the Soldiers' Home in their brief, but we have not been able, on a casual examination, to find it. It has not been deemed important enough by them to put either in the index to the brief or in the summary of facts proved. The evidence in relation to this is summarized in the Colorado brief, on page 40, from which it will appear that this injury was imaginary, and, unless counsel forgot about it, their failure to press the subject in their brief is confirmatory of that view, and it need not be further referred to by us.

As to the State Industrial Reformatory, the amended bill alleges that the land on which that was situated was also injured by the fall of the underflow. What became of this public institution, after the filing of the amended bill, whether it was destroyed by fire or flood, we are unable to say, but it has not been heard of since that time, either in the evidence in the case or the brief of counsel.

5. It suggests itself here, although not exactly connected with this subject, that one of the grievances alleged in the bill is that the State of Colorado had herself constructed irrigating canals and reservoirs. (72.)

The proof shows that Colorado had, long before the filing of the bill, abandoned all these, as well as further intention in that direction as state enterprises.

This charge counsel have also permitted to fall by the wayside and we presume it requires no further notice from us than to say that it answers in the negative the first question suggested by the court in the opinion on demurrer, as to "whether Colorado is herself actually threatening to wholly exhaust the flow of the Arkansas river in Kansas."

This leaves Kansas in the attitude of prosecuting a suit on behalf of a few of her citizens against individual irrigators in Colorado, which suit might have been prosecuted in another court, by her citizens themselves. Ought this kind of a suit to be prosecuted in this court?

Tenth. Estoppel and Laches. Irrigation in Kansas First.

Kansas claims that sometime about 1890 Colorado began to appropriate the waters of the Arkansas river. Ignorance on the part of Kansas as to these operations is not claimed. On the contrary, it is alleged that in western Kansas the same thing began at an earlier day, for on page 236 of Kansas' brief the following appears:

"The State of Kansas has a vested right in the system of irrigation in western Kansas, and may maintain and protect such system, affecting a large part of its territory and a great number of its citizens, by any appropriate action.

"Between the years 1879 and 1888 an irrigation system grew up in the Arkansas valley in western Kansas. Eight different corporations were chartered by the State of Kansas between October 8, 1879, and November 29, 1887, and these companies were organized for the purpose of *irrigating the bottom*

lands along the Arkansas river between the state line and Kinsley. These corporations were referred to in section 14 of this brief, and the dates of their charters were there given, and the evidence shows that within one or two years after the corporations were chartered the ditches were constructed and the water was turned in and used. A few other and smaller ditches were also constructed by private individuals. The charters of all these corporations were introduced in evidence as exhibits Nos. 13, 46, 47, 48, 48½, 49, 49½, 54 and 54½. These corporations are still in existence and operating under the laws of the State of Kansas.

"The State of Kansas has passed a number of laws for the protection of the system of irrigation suited to this part of the State of Kansas. This irrigation system was built up with the consent and under the control of the State of Kansas, and in that system the State of Kansas has now a vested, legal and constitutional right, and such a right as can not be impaired or interfered with by subsequent acts of any other state, or by the citizens of any other state. The acts of Colorado and its citizens, who are defendants in this case, of which we complain, were all subsequent to the establishment of this irrigation system in the five western counties of Kansas, through which the Arkansas valley extends. *In fact, it was from this system in Kansas that Colorado and her citizens conceived the idea of successful irrigation along the Arkansas river.*"

So it seems that instead of the people of Colorado being the original trespassers on the riparian rights of the first bottom land owners along the river, if they have any, these very first bottomers themselves were the pioneers in the business and were encouraged by the legislation of their state, while we of Colorado are but humble imitators and are now to be punished for learning so well.

This quotation, showing that this early Kansas *irrigation* was on the *"bottom lands,"* in 1879, prompts us to inquire, Where was the *underflow at that time*, when it was found necessary to *irrigate* these lands?

On the question of estoppel and laches, it is said in the case of New York vs. Pine, 185 U. S., 93:

"The court of equity which is never active in relief against conscience or public convenience has always refused its aid to stale demands where the party has slept upon his right and acquiesced for a great length of time. Nothing can call forth this court into activity but conscience, good faith and reasonable diligence."

Numerous cases are cited in support of the doctrine stated. It will be noted in that case that the question whether New York had power to appropriate water within the limits of the state was not decided, nor was it decided that the plaintiffs had a legal right to the natural flow of the water in Connecticut, of which they could not be deprived, nor that a court of equity, had action been taken at the beginning, would have restrained interference with the natural flow of the water.

These questions, the court says, are assumed, but *not* decided, and, notwithstanding these assumptions, it proceeded to show that the decree below, granting the injunction, should not stand because of laches. The opinion of the Circuit Court of Appeals in that case is cited by Kansas counsel, notwithstanding it was reversed by this court some years ago, and the questions which were decided by the Court of Appeals in the quotations by Kansas' counsel, were neither affirmed nor decided by this court.

The evidence on behalf of complainant shows the extensive irrigation operation in western Kansas and her counsel on page 238 of their brief say:

"The State of Kansas has a prior and vested right in this whole system, extending through 5 counties, including more than 200,000 acres of land, profitably employing many thousands of its citizens and yielding an annual revenue that helped to sustain its institutions and pay its expenses."

Some operations are cited as having been vitally affected or destroyed. We dispute this conclusion that they have been destroyed or even vitally affected by Colorado irrigators, or otherwise than by mismanagement or natural causes.

But the point we make is upon the *existence* of these irrigation operations, this we do not dispute. These facts are valuable for the defense, under the rule laid down in Missouri vs. Illinois, 26 S. C. Rep., 270, where it appeared that Missouri had been permitting noxious discharges into the Mississippi, similar to those she complained of, and this court said that in so doing she not only offered a standard of conduct for defendant, but also made necessary the—

"Strictest proof that the plaintiff's own conduct does not produce the result *or, at least, so conduce to it that courts should not be curious to apportion the blame.*"

Therefore, being measured, as this court says she should be, in her own "half bushel" Kansas has no ground of complaint against the defendants.

Eleventh. The Control of Waters of Interstate Streams.

While, as we view the case, this question will not be reached, or its decision necessary to a disposition of the case, a brief discussion of it may possibly assist in a satisfactory decision of the questions really in issue here.

1. FEDERAL CONTROL. This question is not raised by the intervening petition of the United States, except inferentially, by the denial that Colorado has the right to divert all the waters of the Arkansas, for the alleged reason that the exercise of such right would limit by state lines the doctrine of prior appropriation, tend to destroy the navigability of streams, and defeat the object of the reclamation act.

Many years ago, when it became apparent that the conversion or reclamation of the arid lands of the United States was destined to become an important question, the writer hereof, with others, argued in the public prints and elsewhere, that "National Irrigation" was a "National Duty."

This was after the "rain belt" theory had populated and depopulated western Kansas and eastern Colorado several times, and was based on the fact that the government, by silence at least, had approved that idea and induced these settlers to buy and settle upon public land requiring irrigation which, the settlers being too poor to provide, the government in equity and good conscience was bound to furnish at its own expense.

In an early trans-Mississippi congress held in Denver, resolutions to that end were voted down, the sentiment then being in favor of donating the public lands to the states in which they were situated, the states to take care of their irrigation, and this senti-

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A moment's consideration will show that there is nowhere in the arid region any water (save in land-locked lakes and streams which sink, as do some in the San Luis Valley, Colorado) which does not eventually flow into and become a part of an interstate and navigable stream.

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ment prevailed in the national congress and resulted in the passage of an act to carry it out, (the Carey act, August 18, 1894) but its results have not been very satisfactory.

Federal control of irrigation, had it been inaugurated at the beginning of the settlement of the arid lands, might have been practicable and for the best, but eastern congressmen opposed it, largely on account of the expense, and the trend of legislation, state and national, as we will attempt to show, has always been against it and in favor of recognizing state control as the settled doctrine in the arid states. Nor has it at any time until recently been asserted that this control should not extend to interstate or navigable streams.

moment's consideration will show that there lakes and streams which sink, as do some in here in the arid region any water (save in land- n Luis valley, Colorado) which does not, event- flow into and become a part of an interstate vigable stream.

The idea of an interstate stream in its entirety, and the logical outcome of such an idea as foreshadowed in the Elephant Butte case (174 U. S., 690) conceding to the United States the power to prohibit the use of water in the upper reaches of such a stream, is restrictive of all irrigation enterprises and threatens the reclamation service infinitely more than the idea of state control.

The holding in that case is based on the right to protect interstate commerce and navigation which begins hundreds of miles below the point at which the acts in question are being done.

The grain and stock which the farmer raises, while on his wagon in transit or being driven to the railroad station to be transported to Chicago, are elements of interstate commerce; the little streams of mountain and plain are also elements of navigation; but we submit that these mere elements are not the subject of federal control until they have reached the highways of commerce or the waters which form the navigable parts of the rivers, and that the United States can have no more control over this supply of water to navigable streams, than they have over the products of farms which may eventually become subjects of interstate commerce.

The doctrine anounced in the Elephant Butte case, if not wrong in its essence, has gone to the limit. If it be further extended, the reclamation and all other irrigation interests are jeopardized.

If the diminution of the water comes from 1,000 or more reservoirs and ditches at the head of the stream and its tributaries, are they all to be destroyed, or partly restrained only, and if the latter, what are to be closed, and when?

If federal jurisdiction over navigable streams is extended beyond the point of navigability, there will be no definite limit to it. It will vary in extent as time passes and conditions vary. Such a doctrine will unsettle every water right above the navigable point, governmental as well as private.

Federal control of navigable streams properly begins where navigability begins, and ends where navigability ends. Any other rule will lead to endless complication and confusion, and work infinitely more harm than could possibly come from the doctrine of

state control and the most radical application of the doctrine of appropriation.

This question can and ought to be disposed of upon principle, without reference to the decisions of the courts of the various states on the subject, except as they throw light on the principle involved, although some of them have declared that priorities should be recognized regardless of state lines.

In the intervening petition of the United States, it is averred that the reclamation act of June, 1902—

"Is the first direct and positive declaration of the intention of congress to undertake active operations in relation to its dominion and control over the unappropriated waters on the public domain."

Just what is meant by this is not clear. If the attorney-general means by this statement that the passage of the reclamation act is the first indication of active operations by congress to reclaim public land, we have no quarrel with him, although under the act of 1888 under which the Sugar Loaf reservoir site was withdrawn and before referred to, surveys for reservoirs and withdrawals of land therefor were authorized and $100,000 appropriated therefor.

The act of March 2, 1889, also authorizes an investigation by the Director of the Geological Survey as to the extent of the arid region which could be redeemed by irrigation and for the selection of sites for reservoirs and other hydraulic works necessary for the storage and utilization of water for irrigation.

If, however, he means that in the reclamation act, congress, for the first time, declared its intention to assert *its exclusive or permanent domain* over un-

appropriated waters on public land, he certainly is in error, as there is no such claim in the act. On the contrary, as will be shown hereafter, that act expressly affirms the right to state control.

Tracing the history of the subject, we find the following:

1. The act of July 26, 1866, recognizes the local "*customs and laws*" as governing use and priority of possession to the use of water. (R. S., section 2339.)

2. The act of July 9, 1870, provides that all patents for land shall be subject to *vested and accrued water rights* acquired under, or recognized by, the act of 1866. (R. S., section 2340.)

3. The act of March 3, 1877, in relation to desert lands, provides that all surplus water over and above that actually appropriated and used by the entrymen "together with the water of all lakes, rivers and other sources of water supply, upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining and manufacturing purposes, *subject to existing rights.*" (19 Stat. L., page 377.)

4. The act of March 3, 1891, grants the right of way through the public lands and reservations of the United States to any canal, reservoir or ditch company formed for the purpose of irrigation and duly organized under the laws of any state or territory, and also provides that "privileges herein granted shall not be construed to interfere with the *control of water for irrigation and other purposes under authority of the respective states or territories.*" (26 Stat. L., section 1102.)

5. The act of August 18, 1894 (the Carey act), grants to the public land states the desert lands there-

in situated or so much thereof not exceeding 1,000,000 acres in each state as the *state may cause to be irrigated,* reclaimed and occupied. (28 Stat. L., page 422.)

6. The act of February 26, 1897, amended the act in relation to the right of way for reservoirs, etc., by adding the following proviso:

"Provided that the charges for water coming in whole or part from the reservoir sites used or occupied under the provisions and this act shall always be subject to the *control and regulation of the respective states and territories* in which such reservoirs are in whole or in part situate." (29 Stat. L., page 599.)

7. The act of 1897, before quoted, authorizing the sale of the Sugar Loaf Reservoir site, has the following proviso:

"Provided, That nothing in this act shall be construed to deprive the *State of Colorado* of the control of the water in any reservoir which may be constructed on this site by any person, or corporation, or association *under the regulations provided by the state laws in such cases.*"

Thus congress was careful even as to this single reservoir to provide for state control.

8. The very act to which the attorney-general refers—the reclamation act of 1902—contains the following:

"Sec. 8. That nothing in this Act shall be construed as affecting or intended to affect or to in any way *interfere with the laws of any state or territory relating to the control,* appropriation, use, or distribution of water used in irrigation, or any vested right

acquired thereunder, and the secretary of the interior, in carrying out the provisions of this act, shall proceed in conformity with such laws, and nothing herein shall in any way affect any right of any state or of the federal government or of any land owner, appropriator, or user of water in, to, or from any interstate stream or the waters thereof: Provided, That the right to the use of the water acquired under the provisions of this act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right."

9. That state control was the intention of the reclamation act, is made as clear as words can express, where it is said, in section 8,

"And the secretary of the interior, *in carrying out the provisions of this act, shall proceed in conformity with such laws.*"

In accordance with this provision, requiring the secretary of the interior in carring out the provisions of the act to *"proceed in conformity with such laws,"* the chiefs of the reclamation service file with the state engineers for their approval plats of reservoir sites and routes of canals, as is required by the state laws of private individuals or corporations, and users incorporate themselves under the irrigation laws of the states in which the projects are located, and contracts are executed between these corporations and the secretary of the interior recognizing this ultimate ownership.

The following is the preliminary statement filed with the state engineer of Colorado in relation to the Gunnison river project in Colorado:

"PRELIMINARY MAP OF THE GUNNISON TUNNEL AND SOUTH CANAL.

"Filing Made Nov. 27th, 1905.

"STATEMENT.

"Know all men by these presents: That the undersigned, the United States of America, represented by I. W. McConnell, engineer United States Reclamation Service, who has been duly authorized by the director of the United States Geological Survey and secretary of the interior, claimant, whose postoffice address is Montrose, Colorado, has caused to be located the Gunnison tunnel and South canal, as hereinafter mentioned, have made these several statements relative thereto and filed in compliance with the laws of the State of Colorado, the accompanying map, which shows the location of said canal, forms a part of this filing and is hereby made a part thereof.

"First—The headgate is located at a point on the west bank of Gunnison river, from which it derives its supply of water. As the east portal and headgate of the Gunnison tunnel are located in an unsurveyed township, a point in the center line of the tunnel at the west portal was tied to a section corner as follows: From the west portal of the Gunnison tunnel, the southeast corner of section 23, township 49 north, range 8 west of the New Mexico principal meridian bears north 66° 30′ east 4,250 feet.

"Second—The land to be irrigated consists of 170,000 acres, located as follows:

"Township 48 north, ranges 8, 9 and 10 west, New Mexico principal meridian; township 49 north, ranges 8, 9 and 10 west, New Mexico principal meridian; township 50 north, ranges 9, 10 and 11 west, New Mexico principal meridian; township 51 north, ranges 9, 10 and 11 west, New Mexico principal meridian; township 15 south, ranges 94, 95 and 96 west, sixth principal meridian.

"Third—Gunnison tunnel. Average end area of said tunnel, 117.85 square feet inside of concrete.

"Width of said tunnel, 11 feet at spring line of arch. Width of said tunnel 10 feet on bottom. Grade of said tunnel, 2.02 feet per 1,000 feet. Length of said tunnel, 30,581.9 feet.

"Note—Several different tunnel sections will be used.

"The carrying capacity of said tunnel is 1,300 cubic feet per second of time (obtained by Kulter's formula, co-efficient of roughness N=0.012), for which claim is hereby made for irrigation purposes.

"South Canal—The depth of said canal is 13 feet. The width of said canal is 70 feet on top. The width of said canal is 40 feet on the bottom. The grade of said canal is 0.12 feet per 1,000 feet. The length of said canal is 61.229 feet.

"Fourth—The carrying capacity of said canal is 1,300 cubic feet per second of time (obtained by Kulter's formula co-efficient of roughness, N=0.025), for which claim is hereby made for irrigation purposes.

"Fifth—The estimated cost of tunnel and canal is $2,000,000.

"Work was commenced by survey on the 1st day of June, A. D. 1901.

"The South canal is a continuation of the 'Gunnison tunnel,' from which it derives its supply of water.

"STATE OF COLORADO, COUNTY OF MONTROSE, ss.

"The United States of America, represented by I. W. McConnell, engineer United States Reclamation Service, who has been duly authorized by the director of the United States Geological Survey and secretary of the interior, being duly sworn, on his oath deposes and says, that though diligence has been used, because of the magnitude of the work on the Uncompahgre valley project, it is impossible to make complete maps and statements within sixty days re-

quired, and that a further and complete map will be furnished for filing as soon as the same can be completed.

"I. W. McCONNELL.

"Subscribed and sworn to before me this 14th day of November, A. D. 1905.

"My commission expires February 6th, 1907.

"FREDERICK W. HEATH,
Notary Public."

"(Seal.)

The laws of Colorado require the statement and maps to be filed within 60 days of the commencement of the work or an affidavit of excuse made. (3 Mills Ann. Stat., section 2265a.)

We are informed that when these maps are completed, filed and approved by the state engineer, the government representatives expect to go into the state court having jurisdiction and procure a decree defining the amount of water to which this project is entitled (depending on the amount of land to be watered), and fixing its priority with relation to other users from the Gunnison river.

Indeed it is impossible to see how the users under this scheme could have adequate future protection without this being done.

Thus is recognized, to its fullest extent, the right of a state to control its waters, unappropriated or otherwise, following, as we believe, the true intent and construction of the reclamation act.

We are aware that perhaps we have, in respect to these references as to what the chiefs of the reclamtion service are doing and intend to do, gone outside of the strict record in the case; possibly not, but in any event, ought they not to be considered matters of

public knowledge and governmental action, such as are proper to be taken into consideration by the court in a case like this, unless they should be disputed by some party to the case, as we presume they will not be.

10. In the regulations concerning Right of Way for Canals, Ditches and Reservoirs over the Public Lands and Reservations, issued from the interior department and approved June 27, 1900, and construing the right of way act of 1891, it is provided, in relation to applications for such rights of way by corporations, as follows:

1. "The eighteenth section of the act of 1891 provides that: 'The privilege herein granted shall not be construed to *interfere* with the *control of water* for irrigation and other purposes under authority of the respective states or territories.' "

"The control of the flow and use of the water is therefore, so far as this act is concerned, a *matter exclusively under state or territorial control*, the matter of administration within the jurisdiction of this department being limited to the approval of maps carrying the right of way over the public lands. In submitting maps for approval under this act, however, which in any wise appropriate natural sources of water supply, such as the damming of rivers or the appropriation of lakes, such maps should be accompanied by proof that the plans and purposes of the projectors have been regularly *submitted and approved in accordance with the local laws or customs governing the use of water* in the state or territory in which the same is located." (Page 5.)

2. "A copy of the company's title or right to appropriate the water needed for its canals, *ditches, and reservoirs, certified as required* by the state or territorial laws." (Page 7.)

3. "A copy of the *state or territorial laws governing water rights and irrigation,* with the certificate of the governor or secretary of the state or territory that the same is existing law." (Page 7.)

The submission and approval provided for in the first paragraph above, refers to the submission to, and approval of, the state engineer. While these regulations are copied from those approved in 1900, they had been in effect ever since the act of 1891 providing for such right of way.

And we are not without high authority that the acts referred to are to be interpreted as we have indicated, and that the reclamation act does not, as the petition of intervention seems to claim, indicate any attempt by congress to assert its control or "dominion" over the unappropriated waters of the public domain.

On September 5th, 1903, the director of the geological survey of the United States under the reclamation act, recommended the withdrawal from entry of certain lands on the Salmon river in Washington, together with the water flowing thereon. The purpose of the withdrawal was to prevent the appropriation of the water flowing through the land in violation of the common-law right of the United States as owners. The secretary of the interior submitted the question to Assistant Attorney-General Campbell of his department and the opinion in the case is found in 32 Land Decisions, 254. The assistant attorney-general says:

"The practical question thus presented is, whether the United States, by the exercise of executive authority, has the right to control the use of unappropriated waters passing through the public lands in a state,

so as to prevent their appropriation by others for any beneficial uses recognized and allowed by the statutes of the states."

The opinion refers to the history of appropriation for beneficial uses and says that in all the arid land states the common law rule of riparian rights has been changed and the right of appropriation for beneficial purposes has been substituted therefor, and says:

"These acts evince a clear and definite purpose to authorize and assent to the appropriation of water upon the public lands in contravention of the common law rule as to continuous flow. As stated by the court in United States vs. Rio Grande Irrigation Co., * * * 'the obvious purpose of congress was to give assent, so far as the public lands were concerned, to any system, although in contravention to common law rule, which permitted the appropriation of these waters for legitimate industries. * * * The absolute right to appropriate the waters flowing over the public lands has been so obviously sanctioned by the acts referred to and so clearly determined by the decisions cited, *as to be no longer an open question.*'"

"The statutes of the state providing for the diversion and appropriation of the waters of a flowing stream for irrigation or other public uses, is a *valid exercise of the legislative power of a sovereign state.*" Citing Fallbrook Irrigation District vs. Bradley, 164 U. S., 112.

It is true that in this decision the attorney-general expressly refrains from deciding whether congress might resume its common-law right of riparian proprietorship as to the unappropriated waters flowing over and upon public domain by the repeal of these statutes recognizing rights in contravention thereof.

This question, he says, need not be discussed in determining the question submitted.

He then refers to section 8 of the reclamation act which we have just quoted and says that it is "*an emphatic declaration that such laws are to continue in force.*" He then concludes:

"A withdrawal of waters from appropriation under the state and territorial laws would be in *direct conflict with the provisions of said section.* I have, therefore, to advise that there is no authority to make such executive withdrawal of public land in a state as will reserve the waters of a stream flowing over the same from appropriation under the laws of the state or will in any manner *interfere with its laws relating to the control, appropriation, use or distribution of water.*"

This decision was approved by the secretary of the interior and is cited in the second annual report of the reclamation service, 1902-3, page 36, as settling the law and policy of the government in that respect.

In the report just referred to, page 31, in which Mr. Newell, chief engineer of the reclamation service, outlines the purpose of the reclamation act, is the following:

OWNERSHIP AND MAINTENANCE OF WORKS.

"Section 6 authorizes the secretary of the interior to operate and maintain all reservoirs and irrigation works until payments are made for the major portion of the lands irrigated, when the management and operation of the works shall pass to the owners of the lands irrigated and the works be maintained at their

expense. This permits the secretary of the interior not only to construct but to operate the works for a period sufficiently long to get everything in good working order. The management then can pass gradually into the hands of an association of the water users."

It is proper to say, however, that the act referred to and the regulations thereunder, do reserve the title to the canals and reservoirs and the control of the water to the government until otherwise provided by congress, which the act and regulations thereunder contemplate will be taken as soon as the government is reimbursed for its expenditures. This, however, will not be exercising control over unappropriated waters, as they will then have been appropriated.

It is the obvious intent that as soon as these reclamation projects are carried to a successful conclusion and paid for, they will finally be owned by the users and administered under local laws. It would be a useless expense for the government to continue to administer the distribution of water after it had been fully reimbursed for the cost of the project.

If it did so, it must conduct the administration under and in conformity with the laws of the state relating thereto, as the adoption of any other or conflicting rules would involve confusion.

Following these congressional acts and the interpretation thereof by the government officers, and believing that they were in good faith and would be adhered to, Colorado has enacted and put in operation eighty pages of laws concerning water rights. (3 Mills' Ann. Stat., Rev. Supp., 1905, 636.)

Before closing this part of the discussion, we feel constrained to quote from the testimony of Prof. El-

wood Mead, chief of the irrigation and drainage investigation of the office of experiment stations of the United States department of agriculture. He has had twenty years' experience in irrigation and is, without question, one of the best posted men in the country on that subject. He was asked to give his views on the subject of interstate waters and, among other things, said the following:

"If in the first place there had been in some way established a system of irrigation districts which would have embraced the drainage areas of streams so that an entire drainage area could have been included in one division, as it is in the State of Colorado, that would, I think, have been the ideal irrigation unit for administrative purposes; but the control of irrigation was left to each of the several states by congress, and there has grown up in each of the states its own system of administration, and as a part of that administration there exists in different states widely different customs both with respect to the use of water in irrigation and with respect to the methods of distributing from streams and from canals. Now the people of those different states have worked out those systems; they understand them. They meet their views, and they are wedded to them. It would be impossible at this date to disturb many of those local practices and local administrative regulations without causing a great deal of confusion and without arousing intense opposition on the part of the users of water. It would be a very difficult thing to do. When we come to consider whether it would be advisable to do that or not, we have to take into account two things —how are we to secure the largest use of water, and how are we to develop the best type of citizen? (1385.)

"My objection to the federal government's control of irrigation was based on other grounds more particularly than on account of the enormous number of men that would be required to do it, and they are

necessarily unfamiliar with conditions in places where they would be required to act. That is, other reasons were more important, and they are these: *First,* that the streams where interference would be required at present or within a great many years are comparatively few; that while there are a great many rivers that are inter-state streams, there are a great many rivers where inter-state problems are likely to be acute. On a great many of the streams where an inter-state division is necessary it is likely that interference to secure a proper distribution will only be required for a brief period in any year, and in many years it will not be required at all; so that while apparently there is a large field for federal supervision, when one comes to know the actual conditions the field is very materially narrowed. Now, that leaves, then, a large part of the territory of each state where the inter-state question does not arise at all." (1418.)

"There is no question that both Wyoming and Colorado would be immensely benefited by the establishment of absolute state sovereignty. There is no doubt that a great many problems of irrigation would be simplified by such a doctrine, but these two states are pre-eminently in a favorable position for the application of that doctrine; that is, as applied to water. I was greatly in favor of the insertion of that provision in the Constitution of the state of Wyoming, which confers on that state the control of its waters." (1419.)

Prof. Mead has certainly no personal interest on the side of Colorado, and these reasons for his faith are not controverted by any other witness.

Thus in none of the acts relating to the beneficial use of water in the arid region or in any official interpretation of such acts, is there found any assertion of federal dominion or control over the unappropriated waters? On the contrary, congress has, over and over

again, specifically and carefully repudiated any such control, and all the interpreters of such acts are agreed as to their meaning.

While the federal government, under its war power, in case of emergency, may doubtless transport powder through the streets of New Yory City in violation of municipal regulations as to safety, it could not, we suppose, under ordinary circumstances do so, or erect and operate a powder mill or magazine on Wall street even on its own land in defiance and disregard of such regulations. No more, we think, can it or will it erect and operate a reservoir or canal within a state, although on public land, in defiance or disregard of state laws in relation to safety, nor will it be claimed, that, after having built such a reservoir it could fill it with water in defiance of state law or prior appropriators whose rights accrued thereunder.

Now that elaborate systems as to the acquisition and control of water with corps of officers have been provided in these states, and the method of administration definitely understood, all at great expense, it would seem that congress ought now to be estopped to change its mind.

It is not to be overlooked, however, that congress has not yet changed its mind. It may never do so. Until it does, and in plain terms asserts its inclination and right, and provides a way and an army of men to administer its control, this court will certainly not be disposed to impose such a duty upon it.

We believe that it is clear that the United States have no other rights in unappropriated water than an individual owning arid lands to which no water right is attached, and that is none whatever, until work

toward appropriation is begun, and that it has now passed beyond the power of congress to change the law, even if it were so disposed.

Equally clear is it, we think, that under the state laws as now understood and administered, the United States have every right required to carry out the reclamation act. If not, there is no doubt that the states concerned will, when so requested, promptly enact such laws, as they are all in sympathy with the purpose of the act.

II. STATE CONTROL. We enter upon the presentation of this contention fully impressed with the fact that it is not looked on with favor by this and other courts and that at first blush it may not commend itself to the judicial mind.

This sentiment has arisen from applying it theoretically here but having in view its practical operation on large and perennial streams where the doctrine can never be of necessary or possible application, a failure to fully understand the conditions and needs of irrigation, and the fact that until recently the doctrine of riparian rights in its narrower interpretation has been the only phase of the water question studied or written about and that in the humid region, where the water was comparatively unimportant, at least not a necessity of life to either party.

Notwithstanding this appreciation of the task before us, we have the utmost confidence that when properly understood it will be seen that it affords not only the best, but the only practicable solution of the water question in the arid regions.

Every citation and argument we have used against federal control applies with equal force in favor of state control.

As early as 1861 and 1867, while a territory, Colorado proceeding in the latter act under the act of congress of 1866, enacted laws relating to the use of water.

The Constitution of Colorado, Article XVI., provides as follows:

"Sec. 5. The water of every natural stream, not heretofore appropriated, within the State of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided."

This was followed year after year by legislative acts making a complete and comprehensive code of laws as to the acquisition and use of water.

This Constitution was adopted and the state admitted to the Union in 1876 and this, the state legislative acts and the acts of congress, July 26, 1866, and since, before referred to, constitute a part of the foundation of our contention.

In connection with this must be borne in mind that it was settled in Broder vs. Water Company, 101 U. S., 791, and cases there cited, that the act of 1866 in relation to water rights was not the establishment of new rights but simply a recognition of pre-existing rights in arid regions.

We have seen the decision in Anderson vs. Bassman, 140 Fed., 14 (C. C.) and have been referred to others of similar import, and bearing more or less on the question of state lines as affecting the rights of appropriators of water.

In none of these decisions have the various acts of congress, the action of the interior department, or

the decisions of this court to which we have referred under the head of Federal Control, or shall hereafter refer to, as showing the trend of ideas on that subject been, as we think, given the consideration which they deserve.

Indeed, they are scarcely noticed in any of them. None of them have shaken our faith in the doctrine we contend for, either as sound in law, or as conducive to the greatest good to the greatest number and thereby promotive of the "general welfare."

Some writers have recently taken, what is little more than a snap shot at the field, and then have announced opinions adverse to state control, which, if they had been followed from the beginning of irrigation, would probably have been feasible, but which are totally inapplicable to conditions which have grown up under nearly 50 years' operation of the idea of state control.

These writers give their opinions apparently without consideration of the practicability of application, the effect on existing conditions, or apparently looking beyond a single illustration where two contestants only are involved. On that narrow view, the equity of which is apparent, they rest a doctrine which, if carried out, would overturn the entire system of irrigation, and destroy the interests of ten people for the relief of one.

Willey vs. Decker, 73 Pac., 210 (Wyo.) is based, to some extent, at least, on the idea that because the territory now comprised in the states of Wyoming and Montana was, before its division into states, comprised in one territory, the subsequent establishment of state lines could not affect the rights of appropriators acquired previous to statehood.

We have also been furnished by counsel with a quotation from the opinion of the United States Circuit Court for the District of Colorado in the case of Hoge vs. Eaton, 135 Fed., 411, as follows:

"The idea of an exclusive right in the people of a state to divert its running waters, to the injury of riparian owners in another state, must be equally untenable. Indeed, the doctrine of riparian ownership and use of running water is not subject to political boundaries. Between the states dwelling in peace and concord, as are the states of our Union, the equal right of the inhabitants of each state to the waters of intersecting streams must always be recognized. Water is essential to human life in the same degree as light and air, and no bounds can be set to its use for supplying the natural wants of men other than the mighty barriers which the Creator has made on the face of the earth."

It may be noted that this case has been reversed on other grounds by the United States Circuit Court of Appeals. (141 Fed., 64.)

It may also be noted that the use of air and light are not free in an unlimited sense, but is interfered with whenever a large building is erected in a city.

Besides this, the opinion seems to be waterlogged between the doctrines of riparian ownership and appropriation for beneficial uses, getting first on one side and then on the other.

But a greater objection to the decision as authority is that the question of state control was not in the case, or argued, but the issue was solely upon the point that complainants had not made a valid appropriation of the waters of Sand creek under the laws of *Wyoming*, and the quoted remarks by the court are purely *dicta*.

Fully reognizing the ability of the courts concerned, and beautiful as are the sentiments in Hoge vs. Eaton, from the standpoint of sisterly love, they all, in our judgment, lack foundation in legal principle.

The admission of a state to this Union is not a wedding, in which the incoming state appears as a veiled bride, coyly approaching the alter and there promising to "love, honor and obey." It is a cold-blooded business contract by which such state agrees to, and does, surrender certain rights enumerated in the federal Constitution. This, and this only.

A state when admitted to the Union stands upon the same footing in all respects as the thirteen original states and that statement is made in every enabling act.

The result is as declared in Texas vs. White, 7 Wall., 700, 725, that

"Not only, therefore, can there be no loss of separate and independent autonomy of the states from their union under the Constitution, but it may be not unreasonably said that the preservation of the states and the maintenance of their governments are as much within the design and care of the Constitution as the preservation of the Union and the maintenance of the national government. The Constitution, in all its provisions, looks to an indestructible union composed of *indestructible states.*"

In Escanaba vs. Chicago, 107 U. S., 678, the question of the right of Illinois to bridge the Chicago river was an issue. As against this right was cited the ordinance of 1878 for the government of the Northwest territory, which contained a clause declaring that

the navigable waters leading into the Mississippi and St. Lawrence and the carrying places between them should be common highways and forever free.

The court said:

"Whatever the limitation upon her powers as a government whilst in a territorial condition, whether from the ordinance of 1787, or the legislation of congress, it ceased to have any operative force, except as voluntarily adopted by her after she became a state of the Union. On her admission she at once became entitled to and possessed of all the rights of dominion and sovereignty which belonged to the original states. She was admitted and could be admitted only on the same footing with them. The language of the act of admission is 'on an equal footing with the original states *in all respects whatever.*' 3 Stat. at L., 536. Equality of constitutional right and power is the condition of all the states of the Union, old and new. Illinois, therefore, as was well observed by counsel, could afterwards exercise the same power over rivers within her limits that Delaware exercised over Blackbird creek, and Pennsylvania over the Schuylkill river."

This same doctrine is again announced in the recent case of Manigault vs. Springs, L. C. Adv. Sheets, Jan. 15, 1906, page 127, where this court again held that a state may dam a navigable stream to drain a swamp.

There is no rule of international law giving the lower nation any right of control over the water within the boundaries of an upper one, or imposing on the latter any duty or obligation to any other nation, in respect thereto.

In 1887 the institute of international law proposed what it denominated a code for the regulation

of international river navigation. Section 26 is as follows:

"In all cases, it is forbidden to works which may change the established use of common waters, or to restrict navigation and against which the other riparian states have protested." Annuaire, volume 9, page 185.

This proposed code has not yet been made a part of international law.

The brief of Kansas, page 255, admits that if Kansas and Colorado were independent nations, the diversion of the waters would be a *causus belli.* It is then claimed that the federal Constitution has created this court as a "commission of arbitration" with full power to decree justice. Therein lies the error of Kansas. This court has no power to arbitrate. Its limit of power is to decide what *is* rather than what ought to be law as between two states which are, in so far as this question is concerned, independent nations.

The brief of Kansas as to "Relief under International Usage," page 251, but serves to emphasize our contention that under international law, Colorado is not bound to permit the water to flow into Kansas. The citations there made show that the right in question was made the subject of treaty and their quotation from the "greatest living British authority" is to the effect that in such case a refusal may be grounded upon "*strict law.*"

Authorities on international law are agreed that the fact that a question has been made the subject of treaty raises a presumption that it was not governed by any rule of international law.

Comity, then, between states is an option, not a bond.

2. If then, the state control of water is not limited by international law, the question arises whether the state power is restricted by any of the provisions of the federal Constitution.

No express right of control over the waters of a state, or interstate streams is given in the federal Constitution to the federal government, as is the case in relation to interstate commerce, coinage, etc.

No surrender of the sovereign right to control its water being pointed out in the federal Constitution, it would seem that the section above quoted from the Colorado Constitution and the laws enacted prior thereto and thereunder, constitute as strong a negation of such surrender as words can convey.

No subsequent act of congress or of the state legislature surrendering this sovereign right has been, or can be, pointed out, and unless it was surrendered at Appomattox, it still exists.

Congressmen, state officers and prominent citizens of Wyoming and elsewhere, have testified that the doctrine of state control would prove disastrous to interests in lower states as well as to the reclamation scheme, but they do not tell us why a joint or mixed state control will be better for either. Their testimony in this respect presents mere conclusions or generalizations without practical demonstration or detail of application. They say the effect would be to "render the reclamation act inoperative except in the upper states" and be "destructive of all irrigation development in the lower states." (1166-7.)

It would seem that the more complex the ownership and control of the water, the more the difficulties in the way.

In considering their testimony on that subject, it must not be overlooked that they are nearly all interested, in so far as they are interested at all in irrigation, either in lower states or in dependent localities like southeastern Wyoming, which depends largely for its water on the North Platte and Laramie rivers, which rise in Colorado, and they are fencing against danger in that direction.

A glance at a map of Wyoming will show that their position in this respect is wholly personal to themselves and favorable to only about one-fourth of their state; that three-fourths of Wyoming has its own sources of water supply in the streams which rise in its mountains, and is a state much more interested in state control than otherwise. This is stated by Mr. Mead, once state engineer of Wyoming. (1419.)

Mr. Hagerman and others of New Mexico, interested in the Pecos river (which rises in New Mexico) are non-committal as to the surrender of state control, while others in New Mexico who have interests on the Rio Grande (which rises in Colorado) have opinions to fit their cases.

One or more members of congress say that when the reclamation act was passed, they had no thought that state ownership would be contended for. This is no more than an admission that the question of ownership and control was not at that time thought of by them at all, as it is clearly asserted by the sections of the act itself, which we have quoted. It is obvious that there were some members who did think on the subject and expressed their ideas very clearly in these sections.

Some government engineers have also expressed fear as to the result of this doctrine on the reclama-

tion scheme, but, like all others who take that view, they fail to point out any dangers which would not be multiplied to the same extent as the number of owners is multiplied.

The attorney-general of Wyoming has also testified to the effect that the Constitution of Wyoming is like that of Colorado in respect to water, but he does not favor the doctrine of state ownership, and refers to a decision of the Supreme Court of Wyoming which he thinks is also against it. We presume he refers to Willey vs. Decker, supra.

The question in that case was, whether a resident of Montana, whose ditch headgate and part of his ditch were in Wyoming, and the lands he watered situated both in Wyoming and Montana, was entitled to priority over junior appropriators, residents of Wyoming, the first appropriation having been made prior to the admission of Wyoming to the Union, the stream being interstate.

The court took a wide scope in its decision and decided as stated before, but expressly refrained from expressing any opinion on the subject if the case had arisen under the *present statutes and Constitution of Wyoming.*

It may not be out of place to notice also that the attorney-general of Wyoming says that he is personally interested in irrigation schemes in Wyoming, dependent on the North Platte river.

Inasmuch as the case did not involve or decide the rights of Wyoming under her Constitution, the authority of an attorney-general to waive or abandon an express declaration of his state Constitution may be open to question. The fact that he did it certainly adds no weight to his opinion.

Analogous to the sovereign right of the state to the water is its right to the game and fish which, like water, are transitory in character and pass from state to state, here to-day and there to-morrow, becoming the property of the state in which they are, for the time being.

In Manchester vs. Mass., 139 U. S., 240 (266), involving the question of the right of Massachusetts to control the fishing in the navigable tidewaters of its coast, the court said:

"The extent of the territorial jurisdiction of Massachusetts over the sea adjacent to its coast is that of an independent nation and, except so far as any right of control over this territory has been granted to the United States, this control remains with the state."

In Geer vs. Connecticut, 161 U. S., 519, it was held that although the state law prohibiting the export of game might remotely and indirectly affect interstate commerce, it was nevertheless a valid exercise of state sovereignty.

In the Racehorse case, 163 U. S., 504, this court held that the admission of Wyoming into the Union operated to rescind a treaty made when Wyoming was a territory, between the United States and the Bannock Indians, in so far as the treaty guaranteed to the Indians the right to return and hunt on their old reservation, Wyoming having forbidden, by general law, hunting within the state at certain seasons.

In this case it is said:

"The power of all the states to regulate the killing of game within their borders will not be gainsaid,

yet, if the treaty applies to the unoccupied land of the United States in the state of Wyoming, that state would be bereft of such power, since every isolated piece of land belonging to the United States as a private owner, so long as it continued to be unoccupied land, would be exempt in this regard from the authority of the state. Wyoming, then, will have been admitted into the Union, not as an equal member, but as one shorn of a legislative power vested in all the other states of the Union, a power resulting from the fact of statehood and incident to its plenary existence. Nor need we stop to consider the argument advanced at bar, that as the United States, under the authority delegated to it by the Constitution in relation to Indian tribes, has a right to deal with that subject, therefore it has the power to exempt from the operation of state game laws, each particular piece of land owned by it in private ownership within a state, for nothing in this case shows that this power has been exerted by congress. The enabling act declares that the state of Wyoming is admitted on equal terms with the other states, and this declaration, which is simply an expression of the general rule, which presupposes that states, when admitted into the Union, are endowed with powers and attributes equal in scope to those enjoyed by the states already admitted, repeals any presumption that in this particular case congress intended to admit the state of Wyoming with diminished governmental authority." (515.)

In all of these cases are numerous citations to other cases, all affirming the same doctrine.

In the Racehorse case is recognized the confusion that would follow if the game laws prevailing elsewhere in the state should not prevail on the isolated tracts belonging to the United States.

Greater confusion would follow from federal control of *"unappropriated waters on the public domain,"* as the intervening petition states it, while unappropriated waters *not* on the public domain, and *appropriated* waters although on the public domain, remain under state control.

Indeed, the statement of the intervening petition involves a problem not possible of intelligible solution. It implies and evidently is based on the theory that *all water on public land* is *unappropriated*, whereas the rights of all appropriators of water under the doctrine prevailing in the arid states extend to all the *water above them and within the state, both on public as well as private lands.*

What waters are *unappropriated* can be determined only by the existing state laws in relation thereto, and the government irrigation projects can only apply to and conserve such waters as have not been appropriated under the local laws, regardless of where these waters originate or the character of lands over which they run.

3. What is the state right doctrine as to the control of water? As we understand it, it is simply that each state has control, through its legislation, of the waters within its boundaries. It does not mean that no citizen of any other state can have or use any Colorado water, or necessarily that it can not be applied beyond Colorado boundaries. Neither the Constitution nor any statute of the state is to that effect. The Constitution does not limit the appropriation or use of Colorado water to Colorado citizens, but simply to the "people of the state," which means persons who come within its territory for the purpose of

enjoying its public rights, whether citizens of the state or otherwise. Rossmiller vs. The State, 114 Wis., 169, 89 N. W., 839, 58 L. R. A., 93.

It simply means that the right to appropriate water in Colorado must be acquired the same as to other property under Colorado laws. These provisions, when complied with, confer a right on the applicant, whether he be a citizen of Colorado or otherwise, to divert the water at any place named within the state, to be taken or used wherever contemplated by the applicant, with the possible qualification that some of the use must be in Colorado.

We cite as an instance the Amity canal of one of the defendants in this case, whose headgate is in Colorado, 40 miles west of the Kansas line, and whose canal runs 30 miles into Kansas.

Many other ditches also having headgates in Colorado extend to, and water land in, Kansas, Nebraska, Wyoming, New Mexico and Utah, and the right to such water has, so far as we know, never been denied when exercised under the laws of Colorado.

It may be that the courts of Colorado will not decree as to the priority and use of water taken from Colorado streams and used upon land in another state, for their jurisdiction is limited in that respect by water districts, but if a resident of Kansas, or any other state, having built a ditch in compliance with Colorado laws in so far as it was located in Colorado, and used some of the water therefrom in the irrigation of land within his own state, he would, perhaps, acquire thereby a right and equity which would be protected by the courts, if the priority was clear and the equity of the result equally clear.

This is substantially the doctrine promulgated in the case of Willey vs. Decker, and the judgment in that case, as we think, might have been well based upon the interpretation of the state right doctrine, above indicated. But this question will rarely occur and is not of controlling importance.

The doctrine of state control of water has been sometimes viewed as one to be exercised wantonly.

Colorado could not, perhaps, wantonly destroy the fish in an interstate stream or the game within her boundaries, but it can scarcely be questioned that she could take and use all of them if it became necessary for the prosperity or existence of her people.

It may be admitted that she could not wantonly prevent the Arkansas water from flowing into Kansas.

Cases cited as to the pollution of water, the construction of dams so as to divert water against the banks of a stream, and the like, which are done, not in the proper but improper use of water, are not parallel.

From the slight summary we have given before, as well as from the brief on behalf of Colorado, it will appear that the irrigators of western Kansas are not suffering very much for the want of water; that they have generally acquiesced in the belief that state control of water was the law; that the conversion and use of water in Colorado has, in fact, tended to increase the summer flow of the Arkansas river in their region and that, eventually, they will probably be very well situated in that respect. That the result of the economic use of water in the upper reaches of streams does increase the flow in the lower, is agreed to by all the experts and the result will doubtless be that, in a few years, not only Kansas, but all the other

people now suffering more or less for want of water in the lower states, will find the flow of the stream sufficient for their purposes.

There is no doubt that the irrigators in all the lower states have generally accepted the doctrine and adjusted themselves to existing conditions about as they have in Kansas.

The complaint in this case is not by the irrigators, but by those who want to "see the water run by."

Those in the upper states have never, until this suit was brought, supposed the question was an open one.

The right of state control has been so long and generally acted on that it will be best for the future of the whole country and will be less inequitable and unjust to the majority of the people than would any other rule.

We believe it to be an indisputable fact that Kansas, and every other arid and semi-arid state, each receives from sources within its borders, more water than it does from interstate streams; that the inclusion or exclusion of flood waters will not change the result.

The drainage maps of these states will, we think, prove this and will surprise those not familiar with these conditions, and for that reason alone, it is to the interest and independence of each to have the state right doctrine prevail.

If Colorado is sovereign as to the control of the waters within its boundaries, Kansas is, to a like extent, sovereign. Any other doctrine would place Kansas waters under the control of Oklahoma; Wyoming waters under the control of Nebraska and Kansas; North Dakota waters under the control of South

Dakota, and so on, each upper state of the arid region under the control of the state below it, the last in the line of descent having the power over all above it, a result as inequitable as it is impossible of practical application.

If, as to the lower appropriators who have priority, the waters must remain untouched until they get there, they may never reach them; if they should, the surplus, if any, must go to waste, as it has passed beyond the reach of the upper appropriators.

It is an accepted fact in irrigation science that the economic use of water requires that the use shall begin at the head of the stream, or as near it as water is required for use, and extend in regular order to the next lower lands. By this means, the waste and seepage waters from the upper lands reappear in the stream successively for the next lower user. If irrigation is not impeded the normal summer flow of all streams in the arid region will be gradually increased, as a result of conservation by reservoirs of all flood waters, and the fuller saturation of irrigated lands.

Where one person in the lower states is injured by the application of the state control doctrine, we venture to say that ten in the same state will be benefitted thereby.

The users of water have acquired their rights under their respective state laws and customs, each user's right depending on conditions local to his state and having relation to the time of acquisition.

The laws of no two of the states are alike as to acquisition, priority of rights or appropriation of surplus water to new land or, in fact, in any respect.

Any amicable adjustment of these rights between the users in different states is simply impossible, as

would be the task of deciding the controversies that would be constantly arising between them.

New rules, if made, could not affect existing rights. The adjustment of the right of a single claimant in Kansas would require that every other upper junior appropriator on the stream, should be made a party to the action and the date and extent of his right ascertained.

The expense of prosecuting such a suit in any tribunal, federal or state, would probably be so great as to deter most individuals from doing so.

The opponents of state control do not point out any plan whereby the appropriation of water is to be administered under some other control.

The objections, we believe, so far as appear in the evidence or suggested by any of its opponents, are but two, namely:

First. The inequity to appropriators in the lower states whose priorities antedate those of appropriators within the crest state.

Second. That unless the government, under the reclamation act, can establish a reservoir in a lower state and fill the same with water from a crest state, the operation of the act will be hindered.

These objections, we have no disposition to deny or evade. There will come some hardship, under the first objection, but this will be chiefly to those who would get no relief from the disregard of state lines.

What relief will be given to a man who appropriated 5 cubic feet of water in Kansas 25 or more years ago before any water was appropriated above him, either in Kansas or Colorado, when at this time there have been 1,000 or more junior appropriations above him?

Will all these new ditches have to be closed until at least 5 cubic feet reach the prior appropriator's head-gates, if it be a possible thing?

If so, the loss enroute from evaporation and absorption will be great and all this the upper appropriators must stand.

In fact, he would not consider for a moment bringing such a suit.

The few cases in which the question has arisen have been those in which the contestants have been near the state line; the interference also near such line, recent in date, and the facts within the present knowledge of the contestants and confined practically to a single well-known interference. To these people the state line doctrine would deny relief and they alone would suffer by it.

Relief by the disregard of state lines would be confined to those so situated and able to carry on costly litigation. To the poor farmer miles below the state line and the point of interference, whose priority is old and the interferences numerous and far away, a right to priority would be a mockery. In short, the man who needed the relief the most would not be relieved. The older his priority the greater the number of interferers. He has no relief now; he would have none then, because, even within state lines, priority of *opportunity* is sometimes worth more than priority of *appropriation*.

The ditch owner in the lower state, whose damage is $2,000 or more, can have relief in the federal courts if the decisions above referred to are sound and are the law, while the one whose damage is less than that will have to submit his rights to the state court where the waters originate.

Many rules once deemed unbending law for the protection of a few have given way to more recent, but superior, equity of the many.

In the Gunnison river and some other Western Slope streams in Colorado there are yet, perhaps, even in the lowest stage, unappropriated waters. In the Arkansas, Platte and Rio Grande in Colorado, and many other streams of the arid states, flood waters only (using the term as also including high water) are unappropriated.

The flood waters in all the arid states comprise the great bulk of those unappropriated, and to these only the reclamation act can apply.

As to these flood waters, there are no prior or other rights yet in existence. Rights, however, can not accrue from the reclamation act for the benefit of prior, but dry, appropriations. New ones must be claimed under the act.

Hence, all such must be junior to those now existing in the upper or crest states.

If each state through or into which runs the stream on which a government reservoir is to be built has an interest in, and control over, the waters of such a stream beyond its respective boundary, the government must get the consent of all these states for the conservation of the water.

How is it practicable to have such authority exercised by two states over that part of a stream wholly within one of them?

There can be no union of method or rules for appropriation or application of such water except by mutual consent.

There must be ownership and control somewhere, and it can not be simplified by an increased number of owners or dividing it between two or more states.

If the need for reservoirs in some of the lower states is, on account of peculiar conditions, imperative, and such construction entails no actual loss to the upper ones, and new legislation is required, no doubt the upper states will, on request, enact it, as they are all in sympathy with the reclamation act.

As to the right of state control over all interests, we believe we have shown that such control has, by the federal Constitution, the decisions of this court and congressional action, been affirmed as a sovereign power of the state and removed from the jurisdiction of this court. Nevertheless, we present the following summary of reasons in its favor, each of which is also a reason against other control.

First. The acts of congress and the Constitution and statutes of Colorado and the official interpretation of all of them.

Second. Other things being equal, the state in which the water originates ought to be entitled to control.

Third. Economic irrigation requires that it should begin at the head of the stream.

Fourth. If the rule of economic irrigation as to the use of water first at the head of the stream is carried out, it may be that the lower states will eventually be better supplied by return and seepage than by any other method.

Fifth. The natural place for reservoirs is in the mountains near the stream sources, where loss by evaporation and seepage is less.

Sixth. The people of both classes of states have generally accepted the doctrine and adjusted their affairs to it, and a change will injure more people and property than it will benefit.

Seventh. Entirely new rules can not now be made and equitably enforced, if possible to enforce them at all, nor could they affect vested rights; therefore, such enforcement could be only as to future appropriations, and endless complications would ensue.

Eighth. If the upper state has actually appropriated, and is using, all the water, it would be inequitable to deprive it of it in order to give it to another state.

Ninth. If it were possible to have tribunals enough to decide between contestants all the questions that would arise, and the litigation was general, it would require an army to enforce them.

Tenth. Within state lines water rights are now fairly well adjudicated and settled, and are as important as titles to land.

Eleventh. The title to water under state control can be made as certain and valid as the title to land. Under any other control, it will never be certain.

Twelfth. The "general welfare" of the people of the United States will be advanced.

Twelfth. The Real Issue and the Conclusion.

On page 6 of Kansas' brief, in what purportes to be a statement of the issues joined in the case, it is stated that Colorado began her diversion of water

"After the lands in the Arkansas valley had been settled and raised to a high state of cultivation, all the bottom lands in the valley being riparian lands and directly affected by the presence and flow of the river, and after parts of the flow of the river had been used for manufacturing and milling purposes, and after the riparian lands had been largely and extensively irrigated in the valley of the river in the western portion of Kansas."

And on page 7 there is found the following:

"And the water for the irrigation ditches in the western part of Kansas has been entirely cut off, * * * the irrigation ditches are left dry and the lands uncultivated."

We have searched both the original and amended bills of complaint and fail to find any such language, or any language that conveys any such idea, and we can not understand what counsel for Kansas mean by injecting such statements into their brief, unless, expecting to fail in their contention, as stated in their bill, they hope to be able to fall back upon the doctrine of appropriation and save something out of the wreck. While it is true that some evidence was taken as to ditches in western Kansas, it is immaterial and irrelevant, except as showing the estoppel of Kansas. If the Kansas amended bill of complaint shows anything, it shows that the case on the part of Kansas must stand upon the establishment of the doctrine of riparian rights in its narrowest phase, or it must fall entirely.

That Kansas has grossly exaggerated the change in the Arkansas river, and the diminishing value of its bottom lands and crops, and attributed to the

wrong cause whatever change has occurred, is conclusively made to appear in the brief for Colorado.

If, however, this court could now believe (what has never been heard of prior to this case) that a few thousand acres of bottom lands in the Arkansas valley in Kansas have been injured, or even totally destroyed, and knew that the water of the upper Arkansas would reach Kansas if let alone in Colorado, it would not be warranted in devastating the immense area in Colorado dependent on the water of the Arkansas river, by prohibiting its use thereon.

No possible balancing of equities could warrant such a decision.

The question of the navigability of the Arkansas river throughout the region embraced in this controversy was never, in fact, involved or seriously urged. Now that the United States have intervened and do not claim anything in that respect, the question is entirely removed from the case.

As if conscious of the weakness of their case when the evidence is weighed, counsel for Kansas, on page 221 of their brief, feel compelled to contend for the narrowest doctrine of the common law, as applied in humid countries, and say that the riparian proprietor may "stand upon the bank and see the stream flow as it was accustomed to run, if he never dips a foot in it, drinks from it or takes any beneficial use whatever." Upon this they must stand and upon this cold-blooded platform the court must decree for Kansas, or not at all.

It is not contended that the domestic water supply of Kansas is affected by the lack of water in the river, no matter what the cause. That supply does and

must come from wells. There is left in the case, then, nothing but the alleged underflow of the first bottom.

If it were absolutely certain that a cessation of irrigation in Colorado would restore the alleged original fertility to these bottom lands, there is no equity in saying that the fertility of all Colorado farms in the Arkansas drainage shall be sacrificed in favor of a part of a few Kansas farms, by depriving the people of Colorado of water which originates in their state.

Without considering what absolute right a state may have to control the waters within it, there is little convincing force in the argument that water within a state the use of which is absolutely essential to the existence of its people may not be used by them simply because the use of it may be equally essential to the welfare of an equal number of the citizens of an adjoining state. Much less convincing is it, if the use in the adjoining state is not a necessity for *anyone*, but a convenience merely for a few to insure a full crop in dry years.

Such a doctrine, in fact, gives paramount right to that state into which the water flows, and assigns to it a sovereign power denied by counsel to the state in which the water originates.

If the law relating to the use of water in the United States had first come in question, and grown up in the arid, instead of the humid region, it is quite certain that it would have been so impressed with rules adapted to the conditions of the arid region, that this case would not have been brought. As it is, the narrow rule as to the right to "stand and see the water run by," has been broadened in the direction looking to the greatest good to the greatest number,

until it has been made to include irrigation, where that right was involved.

In short, like that relating to interstate commerce, it has in those cases been trying to keep pace with the march and requirements of civilization, but generally a little behind.

Had this not been done in relation to interstate commerce, the law in that respect would have been at this time as impotent to guard the "general welfare" as the doctrine of riparian rights as contended for by Kansas.

The relative rights of the two states under the true and broader rules of the riparian doctrine, have been fully discussed in the brief for Colorado, and we fully agree with the doctrine therein contended for, and the conclusion that neither Colorado nor any of the defendants have been or are proposing to do anything violative of such rights.

On page 244 of their brief, Kansas counsel state their claim as follows:

"We are entitled to the Arkansas river as it was accustomed to run; whatever of Colorado customs, enactments or practices deprives us of that flow is to that extent unlawful, to that extent without right, and we complain of that—no more, no less. *Whatever there may be of the waters of the Arkansas river above its normal flow we make no claim to.* Colorado and the federal government may settle that; but to the full extent of its *normal flow as it was accustomed to run in all the years from the earliest times down to about 1888* we are as much entitled as to the air we breathe here in Kansas, to the soil of the valley which we have bought and paid for, believing that we bought with it these vested rights."

In this summary of their contention, counsel disclose that the relief they seek is impossible; that no human ingenuity is equal to the task of drawing such a decree as they ask for, or if drawn, nothing short of Divine omniscience could enforce it.

Who has testified as to what this normal flow was prior to 1888 or at any time, in gallons, feet or other measurement? It is an undefined and undefinable quantity. Who has testified that the closing of certain designated ditches in Colorado will let the normal flow go by, and how long and at what time of year they shall be closed?

There is no ground on which such a decree can rest and be intelligible and enforceable.

The court can not restrain the state of Colorado as to its legislative action, nor repeal or annul statutes under which water rights have been vested or may be acquired, and are generally administered, nor can it render or enforce any decree of partial restraint as to the use of the water, because there is nothing from which it can determine who shall be restrained or how much restraint is necessary to afford Kansas the relief she asks, nor has this court the instrumentalities for such enforcement.

We do not mean to be understood by this, that the defendants in this case would not obey any decree entered by the court, as they might understand it, but unless each defendant herein is definitely advised by the decree the amount of water it may or may not use and the date of opening and closing its head-gates so that there is left to it no discretion, then officers, appointed by some authority, must be in continual attendance to exercise this discretion and determine these things.

But even then it is obvious that Kansas may not get the relief she asks, not only because (as heretofore suggested) it is not shown or known how much curtailment of use by defendants will be required, or whether, if all the defendants are cut off it will restore the alleged normal flow, but because there are 1,000 or more ditches in Colorado and the Arkansas drainage, the owners of which are not parties to this suit and who would not be bound by the decree, and who could not be expected to commit financial suicide by closing their head-gates, until some decree personally binding on them is rendered.

This court does not act as a board of arbitration to settle controversies between states on a give and take basis, regardless of legal rules or sovereign rights, nor does it *compel* comity, nor act in a legislative capacity to make law to fit every controversy that may arise between states.

The controversy must be one in which the complaining state has a clear legal right which the defendant has violated, and the complainant must be able to point out the law under which it is entitled to relief, the character of the judgment or decree it is entitled to, and that this court has the power and instrumentalities in esse to enforce it.

Leaving out the question then, the right of a state to control without limitation the waters within it, what rule of law is to be applied?

International law furnishes no rule in such a case.

The riparian doctrine as Kansas counsel interpret it, and which they say prevails in Kansas, does not prevail in Colorado.

A decree if rendered must be enforced in Colorado. Kansas riparian law cannot be applied to Colorado where the law of appropriation exists. If Colorado law is applied, and there is no other that can be applied then none of the defendants have violated it.

Or will Kansas have the court decree generally that the defendants must let the "normal flow" go by, leaving the amount of such flow undefined and to be determined by the defendants? If so, the case is just where it was when it was begun.

Kansas must have either an absolute decree restraining every use of the water other than domestic in Colorado, or she can have none.

As said by this court in the case of Missouri vs. Illinois, 26 Sup. Ct. Rep., 268:

"The only ground on which the state's conduct can be called in question, is one which must be implied from the words of the Constitution. The Constitution extends the judicial power of the United States to controversies between two or more states and between a state and citizens of another state and gives this court original jurisdiction in cases in which a state shall be a party; therefore, if one state raises a controversy with another, this court must determine whether there is any principal of law, and if any, what, on which the plaintiff can recover. But the fact that this court must decide, does not mean, of course, that it takes the place of the legislature. * * * But it does not follow that every matter which would warrant a resort to equity by one citizen against another in the same jurisdiction, equally would warrant an interference by this court with the action of a state. It hardly can be that we should be justified in declaring statutes ordaining such action void in every instance where the Circuit Court might intervene in a private suit, upon no other ground than

analogy to some selected system of municipal law and the fact that we have jurisdiction over the controversies between states. * * * Before this court ought to intervene, the case should be of serious magnitude clearly and fully proved, and the principle to be applied should be one whcih the court has prepared deliberately to maintain against all considerations on the other side. * * * Even in cases between individuals, some consideration is given to the practical course of events."

We have passed unnoticed some of the minor grounds of objection to the bill, such as proper parties, jurisdiction, etc., preferring in the attitude the case has finally assumed, to meet the contentions of Kansas upon the broader questions involved, believing that we are right in our contentions on all those points.

In the opinion in this case on demurrer it is said:

"Sitting, as it were, as an international, as well as a domestic tribunal, we apply federal law, state law and international law as the exigencies of the particular case may demand."

There being no international or federal law requiring a sovereign state to permit its waters to run into an adjacent one, there is nothing left but state law to be applied. Kansas claims that in her domain the riparian doctrine is in force. Colorado claims that in her domain the appropriation doctrine is in force.

This court has no power to declare the state law of Kansas in force in the State of Colorado, as to water, any more than it has to declare any other Kansas law operative in Colorado, or vice-versa.

It can not base a decision for Kansas on equitable ground, such as a joint commission appointed by the

states with plenary powers might do. The only question which the court can decide as between Kansas and the defendant is, whether the riparian or the appropriation doctrine controls the waters of the Arkansas in Colorado.

The submission to the court of a controversy between states under the Constitution, breaks down no right which a state has, as an independent or sovereign power, nor does it create any new right in the complaining state.

The Federal Constitution provides that a person charged in any state with treason, etc., and fleeing from justice to another state, shall be delivered up on demand of the state wherein the crime was committed. In discussing this Judge Cooley, in his Principles of Constitutional Law, 3d Ed., page 210, says:

"It is the duty of the executive on whom it is made, to respond to it and he has no moral right to refuse. Nevertheless, if he does refuse, no power has been conferred on the federal courts to compel obedience."

So in the case at bar, even if this court should find that Kansas has some rights in this water, there is no provision of law which authorizes it to interfere, nor to compel the legislature of Colorado to repeal its irrigation laws nor to declare, generally, that Colorado shall cease the use of the water of the Arkansas river; nor can it do more in the case as made by the United States than discuss academically the questions involved, unless it shall uphold the doctrine of state control, as applied to the arid region. It can not turn the control over to the federal government, at least until congress shall act in that direction.

Counsel for Kansas call attention to the "tremendous and far-reaching consequences of any decision of this case; that the public interest has deepened and broadened as its extent and far-reaching nature have become known."

This is partially true only. If this court shall decree that irrigation along the Arkansas valley in Colorado shall cease, or be materially abridged, in order that the riparian owners of a few first bottom lands in Kansas may "stand upon the bank and see the stream flow,"—a decree, the effect of which will be to condemn to desolation millions of acres of irrigated and irrigable lands throughout the arid regions and operate as a writ of ejectment against a million or more of the inhabitants of these regions, it will produce "tremendous and far-reaching consequences."

If, on the other hand, the court shall decide that the alleged and prospective injury to Kansas, by operations in Colorado has not been proven, or is too insignificant to require the wiping out of the accomplishments of the last half century in the arid regions, that part of the case will soon pass into the oblivion it deserves.

This brief is not intended as a general or comprehensive discussion of all the subjects embracing defenses common to all, as they have been, in briefs filed at former hearings, as well in those submitted at this time on behalf of other defendants, more fully discussed. We have discussed the fact questions which we have discussed at all, principally from the standpoint of complainant's own witnesses as developed on cross-examination, in order to illustrate the manner in which the case has been presented in the

opening brief by the attorneys of Kansas, and to show that if considered alone on the evidence introduced on behalf of Kansas, it conclusively appears that her case is a theory and not a condition, and does not require the intervention of this court.

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Denver, Colorado, April 21, 1906.